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OBSERVATIONS

ON THE

R
ASTHMA,

AND ON THE

HOOPING COUGH.

LONDON:

Printed for T. Cadell (Successor to Mr. Doolittle),
T. Norrman, in the Strand, and
J. Payne, in Pall-mall; and
S. Moore, in St. Paul's Church-yard.

Observations on the Spasmodic Asthma
of Children. by W. Bush. 1770. 8.

OBSERVATIONS

ON THE

ASTHMA,

AND ON THE

HOOPING COUGH.

BY JOHN MILLAR, M. D.

Καλὸν γὰρ ἐκ τῆς διδαχθέντος ἔργου λόγος. το γὰρ
οἶεσθαι μὲν, μὴ πρήσσειν δὲ, ἀμαθείης καὶ ἀτεχν-
νίας σημεῖόν ἐστιν.

LONDON:

Printed for T. CADEL (Successor to Mr. MILLAR)
T. NOTEMAN, in the Strand; and JOHNSTON
and PAYNE, in Pater-noster Row.

M DCC LXIX.

OBSERVATIONS

ON THE

ASTHMAS,

AND ON THE



BY JOHN MILLAR, M.D.

Widmann.

Printed for T. Cadell (Successor to Mr. Millar),
T. Notman, in the Strand; and Johnstone
and Payne, in Pall-mall Row.

L O N D O N :

Printed for T. Cadell (Successor to Mr. Millar),
T. Notman, in the Strand; and Johnstone
and Payne, in Pall-mall Row.

M DCC LXX.

TO THE
QUEEN.

MADAM,

THE obvious difficulties which attend the study of the Diseases of Children, have prevented

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that very useful part of medical Knowledge, from being carried to the same degree of perfection to which other branches have arrived. If the following Observations have any merit, the subject will recommend them to the public, and render them particularly acceptable to your MAJESTY, so deeply interested as a Mother, and as a Queen, in the success of every Attempt to alleviate the Distress, and lessen the Danger to which the
 help-

helpless state of Infancy is exposed.

From this consideration, I have presumed to intreat the Honour of being permitted to publish this Treatise under the sanction of your Royal Name ; and am,

With the most perfect Duty
and Respect,

M A D A M,

Your MAJESTY'S

Most faithful,

And most obedient Servant,

John Millar.

helpless state of Insanity is
exposed.

From this consideration
I have presumed to interest
the Honour of being per-
mitted to publish this Tra-
ct under the sanction of
your Royal Name; and am,

With the most perfect Duty

and Respect,

M A D A M,

Your Majesty's

Most faithful,

And most obedient servant,

John Millar.

P R E F A C E.

TH E accounts which have been given of the Asthma by medical writers, seem only applicable to very advanced stages of it, or to other disorders, accompanied with a symptomatical difficulty of breathing; but perhaps without some previous knowledge of the original disease in its simplest form, more complicated cases can neither be clearly explained nor properly

perly treated. The Author of the following Observations, having often seen it in children, unattended with any other complaint, hath given a description of it, as it really appeared, though very different from that which is to be found in books.

Conscious of the difficulty of such an attempt, he does not suppose that he hath completed the history of the disease, but hath endeavoured to collect such observations, as may facilitate the further investigation of it; to point out the particular signs that distinguish it from other disorders in which respiration is only accidentally affected; and he proposes a method of cure which hath often been successfully applied.

Some

that he hath neither wantonly opposed the doctrine of others, nor rashly advanced any ill-grounded opinions of his own ; he is certain at least, that he hath not willfully misrepresented any circumstance, nor asserted any fact without sufficient foundation ; but whatever care he may have taken to free this Work from errors, many, he is sensible, may have escaped him ; yet, if the execution of it is in any degree equal to his zeal for the improvement of the Healing Art, it may not perhaps be altogether useless to the Public.

London, Dec. 24,
1768.

C O N.

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ERRATA.

Page 48, after Chapter VI. add, Asthmatic cases.
 p. 59, line ult. in the notes, for præfet, *read*, præfat.
 p. 66, l. 7, in the notes, for præfferat, *r.* præcesserat.
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 assimulated, *r.* assimilated. p. ib. l. 12, for unassimu-
 lated, *r.* unassimilated. p. 110, l. penult. in the notes,
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 sis. p. 129, l. 10, dele the hyphen in hectic-fever.
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 for Lieutand, *r.* Lieutaud. p. 185, l. 7, dele the point
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 dostan.

INTRODUCTION.

HIPPOCRATES was the first who transmitted to posterity a genuine history of diseases, and a rational method of treating them, founded upon faithful and accurate observations: but that simple and natural mode of improving medicine was soon vitiated by the introduction of false and absurd systems of philosophy. Such were the doctrines of occult qualities, chymical effervescence and explosion, and of the influence of Archæus, and other imaginary Dæmons over the human body. While such absurd theories were taught in the schools of medicine, the practice deduced from them was no less ridiculous; and as one or other of these opinions prevailed, the attention of the physician was employed in search-

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2 INTRODUCTION.

ing after medicines possessed of occult powers, or in promoting, or restraining the chymical effervescence and explosion, or in stimulating the sluggish, or appeasing the enraged Archæus.

BUT these chimerical notions at length gave way to the genuine philosophy introduced by Dr. Harvey, who investigated and demonstrated the circulation of the blood; a discovery of the greatest use in explaining the animal œconomy, and in pointing out a rational theory and practice of physic.

FROM thence, too, the greatest improvements in surgery have taken their rise; and the severe operations of actual and potential cautery, have yielded to the milder ones of ligature and incision.

THE many modern improvements in natural knowledge, and in experimental philosophy, have also thrown new
light

INTRODUCTION. 3

light on some of the most intricate branches of medicine: but the mechanical physicians, by extending the influence of these principles too far, have been led into error; and have thereby afforded a new proof, how dangerous it is to build the practice of physic upon any other foundation, than that of experiment and observation.

A CAREFUL attention to the rise and progress of diseases, and to the effects of the medicines applied to them, is the only proper way to complete their history, and to establish a certain method of cure.

PHYSICIANS fully convinced of this, and that no single person is sufficient for so great an undertaking, have long since established societies for collecting and publishing medical observations, which have contributed greatly to the improvement of the art.

4 INTRODUCTION.

BUT tho', by these means, most diseases have been fully and accurately described, and their treatment perfectly ascertained, yet some there are, which have almost entirely escaped observation, or have been treated in such a manner, as is rather calculated to mislead than instruct physicians. Of this number is the Asthma; a disease the most painful and dangerous of all those to which we are liable.

SIR John Floyer, who was himself afflicted with this disease, describes the chronic asthma, and gives a just detail of its symptoms: but as he was first seized with it when a child, he gives no account of its beginning, nor of the method of treating that early period of it, in which, perhaps, alone a perfect and complete cure is to be obtained.

MOST other authors who have wrote on this subject, treat, under that denomination, of the Peripneumony, Vomica

INTRODUCTION. 5

mica Pulmonum, Flatus, Hypochondriac and Hyfterick Diseases, and, indeed, of almost every other disorder, accompanied with difficult respiration, excepting the least complicated state of that which they undertake to describe.

THIS will not appear surprising, when we consider, that an asthma, or difficulty of breathing, is a leading symptom, in all the diseases already mentioned, as well as in many others; and, as it is painful and alarming, the patient, tho' a symptom only, deems it a primary disease, wishes ardently to be freed from it, and represents it principally to the attention of the physician.

ON the other hand, as the least complicated species of asthma generally attacks children, or very young subjects, it is frequently confounded with the epilepsy, worms, teething, and other disorders incident to the early period of life, in which the physician can avail himself but little of the information of

6 INTRODUCTION.

his patient, and is often misled by that which he obtains from others. Hence the accounts of it which we meet with in medical books, tho' they may correspond to certain stages of it, or to the appearances of other diseases, in which a difficulty of breathing is a leading symptom, yet they convey no explicit idea of the origin and progress of the asthma in its simple uncomplicated state.

HAVING, in my very early practice, had an opportunity of seeing this disease in a great variety of cases, and finding the observations I then made, confirmed by later experience, as well as by the information of other practitioners in medicine, I now communicate them to the public; presuming that they may furnish some materials towards the history of a disease, which seems to have been but slightly touched upon by the antient physicians, and even in these modern times, so remarkable for many valuable discoveries and improvements in

INTRODUCTION. 7

in medicine, almost entirely overlooked by medical writers.

BEFORE I proceed to relate the appearances of the disease, it is proper to observe, that the following account of it, is drawn up principally from cases that occurred in the county of Northumberland, and in the shires of Roxburgh and Berwick; for although I am convinced, as well from information, as from having met with a few instances of the disease in other places, that it is universal; yet it seems necessary fairly to state every circumstance, that may have the least tendency to throw light upon the subject, or on which others may reason differently.

WITH the same view also, the historical account of the disease and its cure is presented to the reader, as little interrupted with reasoning or inferences, as the nature of the subject would admit. These I have reserved

8 INTRODUCTION.

for that part of this performance which contains the theory of the disease, and, therefore, though it should not be approved of, yet the first may still be considered as a narrative of facts, established by many years attentive observation.

It is drawn up principally from that occurred in the county of Northumberland, and in the towns of Rothburgh and Berwick; for although I am convinced, as well from information, as from having met with a few instances of the disease in other places, that it is universal; yet it seems necessary fairly to state every circumstance, that may have the least tendency to throw light upon the subject, or on which others may reason differently.

With the same view also, the historical account of the disease and its cure is presented to the reader, as far as the interrupted with reasoning or in-
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I have relieved
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PART I.

CHAP. I.

**SOME ACCOUNT OF THE WEATHER,
DURING THE PREVALENCE OF THE
ASTHMA, IN NORTHUMBER-
LAND, BEKWICKSHIRE AND ROX-
BURGHSHIRE, AND OF THE CONCO-
MITANT DISEASES.**

THE counties where these obser-
vations were made, afford per-
haps more variety of soil and situation,
in a circle of forty miles, than the same
extent of country any where else in the
island: some parts of it are moun-
tainous, some low, dry and warm, and
others of a deep clay soil, which retains
the moisture long, and is consequently
cold and damp.

IN

10 OF THE WEATHER,

IN a country, thus various in soil and situation, it might be expected, that a like variety of diseases would be found; but that is by no means the case. About the summer and winter solstice the country is generally healthy; but a remitting fever of the putrid class, prevails universally in spring and autumn, and especially in moist seasons; and though it is perhaps less frequent in situations that are dry and warm, than in such as are cold and mountainous, or low and damp, yet it is every where prevalent.

THIS fever yields to an early and judicious administration of the Peruvian bark, either alone, or joined to other medicines, appropriated to particular circumstances, as different cases may require; but, when left to its own course, or when much time is protracted in preparing the patient, as it is called, for the bark, or when that medicine is given in too small doses, it either proves fatal

tal in a few days, or the remissions become less and less distinct, till they are totally lost in a tedious continual fever, which yields very little to the application of medicines, and of which the event is extremely precarious.

IN the summer of the year 1755, a great quantity of rain fell, the harvest was late and wet, the crop scanty, and the grain much damaged. In the month of October the asthma appeared: slow fevers of the remitting kind were then frequent; nervous, hysterick, and hypochondriac diseases were common; many had complaints in the stomach, attended with indigestion, nausea and vomiting; several young people were seized with dangerous inflammations in the bowels; the iliac passion likewise occurred in such as were far advanced in years, without having contracted any of the infirmities of old age, and some old people died paralytick.

SUCH

SUCH complaints occur sporadically in almost all seasons ; but the air at this time seemed particularly noxious to children ; for while the Asthma prevailed, another disease also appeared amongst them, which, tho' less frequent, was no less dangerous to those who were seized with it.

THIS was a slow remitting fever, attended with coldness and shivering fits, succeeded by ardent heat and thirst ; the fever was commonly alleviated, tho' not removed by sweating ; the pulse was quick, low and creeping, and the urine pale.

THIS fever was accompanied with a tumour on the neck, or under the jaw, of an indolent nature, hard and incapable of suppuration ; the skin often gave way, and then it put on a sphacelated appearance, which was always a fatal sign. All copious evacuations were
hurtful ;

hurtful ; but the Peruvian bark given early, seldom failed to perform a cure.

THIS disease seems somewhat analogous to the ulcerated fore throat, so accurately described, and so judiciously treated by Dr. Fothergill, with this difference, that the former was entirely external ; and the mouth, throat, fauces and intestinal tube, were never affected.

IN such a constitution of the air, it might be expected, that mucous, catarrhus, and ulcerated fore throats would have been frequent ; but they were much less so, than is usual at that season of the year.

SUCH was the state of the weather, which at this time introduced the asthma, and such were the concomitant diseases ; and as there was little variation in succeeding years, it is sufficient to observe in general, that from a meteorological register, very accurately kept by
an

14 OF THE WEATHER, &c.

an ingenious clergyman, for almost 14 years, compared with a journal of diseases during that period, it appears, that the asthma was more or less frequent according to the state of the weather, that it prevailed most in spring and autumn, and especially in moist seasons, accompanied with east and north-easterly winds, when the weather was variable, when the mercury in the barometer was fluctuating, but generally low, and when sudden changes from frost to thaw were frequent.

CHAP.

C H A P. II.

DESCRIPTION OF THE ASTHMA.

THE divisions of a difficulty of breathing, into the Asthma siccum et humidum, crampum, et convulsivum, Dyspnœa and Orthopnœa, and many others of like importance, so much laboured by some writers, I purposely avoid, as tending rather to perplex than instruct. Whoever is curious to know in what manner that part of the subject has been handled, may find a very full account of it by Etmuller, in his Collegium Practicum de Morbis Humani Corporis*.

BUT in order to describe the Asthma clearly, it is necessary to divide it into
acute

* Caput xiv. de Aeris Inspiratione Læsa.

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acute and chronic, and to treat of each of these separately.

MANY of the animal functions may be suspended for some time without immediate destruction ; but respiration is so essentially necessary, that no creature, that has once been accustomed to breathe the free air, can subsist long without it. The total want of air soon destroys, and a partial interruption of it, occasions the greatest disorders in the animal frame : but a genuine account of the symptoms will better illustrate the subject, than a minute detail of subtile scholastic distinctions. I shall therefore now proceed to the description of the acute Asthma, which is the simplest species of the disease, and as it differed greatly as well in the violence of the symptoms, as in the danger with which they were attended, it will be proper to distinguish it into two stages ; the first of which generally yielded to a careful application of remedies ; the second seldom admitted of a cure.

SEC-

SECTION I.

First STAGE of the acute ASTHMA.

IT attacked chiefly children, from one to thirteen years old; it was rarely seen in adults, and seldom in children on the breast, but it most frequently seized those who had been lately weaned. Its violence fell principally upon the lower class of people, and on those who were of a heavy leucophlegmatic constitution, who had a voracious appetite, and whose diet consisted of crude watery vegetables; though children who were healthy, well proportioned, and moderate in their diet, were not entirely exempted.

CHILDREN at play were sometimes seized, but it generally came on at night; a child who went to bed in perfect health, waked an hour or two after-
C ward

ward in a fright, with his face much flushed, or sometimes of a livid colour, incapable of describing what he felt, breathing with much labour, and with a convulsive motion in the belly; the returns of inspiration and expiration quickly succeeding each other, in that particular, sonorous manner, which is often observed in hysterick paroxysms. The child's terror sometimes augmented the disorder; he clung to the nurse, and if he was not speedily relieved by coughing, belching, sneezing, vomiting or purging, the suffocation increased, and he died in the paroxysm.

BUT if any of these happened naturally, or was excited by art, the paroxysm ceased, and the child seemed perfectly well, slept during the remainder of the night, and continued to breathe easily till the next evening, when, if not sooner, he suffered another paroxysm, more violent, and of longer duration than the former.

THE urine was secreted in small quantity, and often discharged with some difficulty; it was generally limpid in the beginning, but in the progress more copiously evacuated, and either dropped a very light cloud at the crisis, or became turbid, and was covered with a white greasy scum, and sometimes let fall a copious farinaceous sediment.

THE body was generally costive, and the stomach and bowels were often very much inflated.

THE mucus was not discharged from the nose, as is usual in children, and the perspiration was either diminished or entirely obstructed.

IN the beginning, the pulse was but little affected, though in the progress of the paroxysm it became quick, low, and feeble.

IN that state of the disease, which may be styled the intermitting stage, the patient was generally dull, timorous and dejected, even when free from the asthmatic paroxysm. It was of great consequence to attend to this, as it afforded a sure criterion, by which the disease might be discovered, when no other symptom of it appeared, and when the patient was in danger of being neglected from a fallacious security, founded upon a persuasion of its being entirely removed; but when these symptoms were observed in children of a more advanced age, who had once been attacked with this illness, a speedy return of the asthmatic complaint might with certainty be prognosticated.

THIS dejection was not so readily discovered in very young children; but if they were peevish, restless and fretful, and cried more than usual, a return of the disease might be expected.

IN some, a train of nervous symptoms appeared at this period, such as involuntary laughing and crying, delirium and subfultus tendinum; but excepting a slight delirium, observable in many, these appearances were not frequent.

THE attention of the physician was absolutely necessary to this disease at its very first appearance, and in its latent intermitting stage, as it was in that period alone, that the cure could be attempted with much hope of success. This stage sometimes continued eight or ten days, but more frequently the other commenced the second or third day, nay sometimes the very first paroxysm proved fatal.

SECTION II

Second STAGE of the acute ASTHMA.

IF the first period was neglected, the paroxysms returned with greater violence, and at shorter intervals, till the

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difficulty of breathing became fixed and permanent ; the child grew hoarse, and breathed with a croaking noise, so as to be heard at a considerable distance ; the pulse now intermitted ; it became so low as scarcely to be felt, and so quick, that the pulsations could not be reckoned. The shoulders were raised at every inspiration, which was now performed with great agony ; the stomach and belly swelled ; a profuse sweat broke out upon the head, face and breast, the extremities were cold, the countenance of a livid colour, the eyes hollow, and the lips, tongue and throat, dry and parched. The child had great thirst, but durst not drink, as every attempt to swallow, was attended with the danger of instant suffocation.

THE patient now either gradually sunk under this accumulated distress, or the violent convulsions, which generally came on at this period of the disease, put a speedier end to his sufferings.

THOUGH

THOUGH the acute asthma usually terminated in a few days either in death, or a perfect recovery, yet there were several instances of its being changed into a different form, and the patient, surviving the violence of the first attack, continued ever afterwards subject to the chronic asthma.

C H A P. III.
OF THE DIAGNOSTIC
SYMPTOMS.

AS this disease may be confounded with some others, it is necessary to mention the Diagnostic signs which peculiarly distinguish it.

In general, it was easily known by the languor and dejection which accompanied it, by the small, irregular, quick pulse, and by the remission and periodical returns of the paroxysms. These, together with the difficulty of breathing, were the pathognomic symptoms of the disease.

It is often, especially in very young children, confounded with the epilepsy;
fy;

fy ; but the convulsions are seldom universal, at least at the beginning ; and therefore it may generally be distinguished by the laborious breathing, and by the spasms being chiefly confined to the organs of respiration. *

THE strictest attention is requisite to distinguish it from an inflammation of the lungs or pleura, as a mistake in this point might prove fatal to the patient. An inflammation of the lungs or pleura is not attended with so great languor and dejection ; the pulse is seldom so irregular, at least in the beginning ; the

* Practical physicians have observed, that a like resemblance to convulsions in many other diseases, often proves fatal to children in early infancy.

Presque tous les enfants qui meurent avant l'âge d'un an, & même de deux, meurent avec des convulsions ; l'on dit qu'ils sont morts des convulsions, et l'on a en partie raison, ce sont en effet les convulsions qui les ont tués ; mais ces convulsions elles-mêmes sont l'effet d'autres maladies qui demandent toute l'attention de ceux qui ont soin de ces petites créatures, et ce n'est qu'en combattant ces différentes causes qu'on peut guérir les convulsions. M. Tissot avis au Peuple, Chapitre xxvii. pag. 458. A. Lyon 1763.

difficulty

difficulty of breathing in the progress of these diseases is constant and continually increasing, but the struggle is not so violent as in the Asthma.

IN the inflammatory, catarrhus, mucous and ulcerated sore throat, a difficulty of breathing is often occasioned by the swelling and stricture of the parts, the jaws are stiff, and the mouth can be opened but a very little, and that with great difficulty; but in this disease, none of these parts are affected. The apthous appearance strongly marks the malignant sore throat, but never accompanies the Asthma.

IT is sometimes difficult to distinguish it from the globus hystericus, and other complaints, comprehended under the general title of nervous disorders; but as the treatment in both is similar, a mistake of this kind will seldom be attended with any bad consequence. To recount the minute distinctions is unnecessary, as they may be inferred from the

the description of the disease : it must, however, be observed, that tho' respiration is often affected by nervous complaints, yet in these, the spasms are not so violent, nor the breathing so laborious.

IN fact, the violence of the symptoms during the paroxysm, and the almost total absence of them in the remission, together with their irregular succession to each other, are the principal diagnostic signs of the disease.

CHAP.

the description of the disease: it must, however, be observed, that tho' inspiration is often affected by nervous complaints, yet the symptoms are not so violent, nor the breathing so labo-

OF THE PROGNOSIS: TICKS.

SO complicated is the structure of the lungs, so essential are their functions to life, and so liable to injury from a variety of causes, that the cure of their diseases has ever been reckoned one of the most difficult problems in medicine.

WHEN they have once been injured, how many causes concur to aggravate the disorder? They are constantly in motion, and how necessary do we find a state of rest for repairing any injury, even of the external parts? They are destined to throw out such particles from the blood, as have, by repeated circulations,

tions, been rendered unfit for the purposes of life, and how apt must such acrid matter be to hurt the tender vessels, when it is even for a short time retained? No part of the body is so much exposed to the influence of the external air, how much therefore must they be affected by the different changes of the atmosphere?

BAGLIVI, a very eminent mechanical physician, earnestly exhorts young practitioners, to employ their utmost attention in treating pulmonary diseases; and warns them not to be deceived by fallacious appearances, nor easily induced to make a favourable prognostic concerning them*.

* O quantum difficile est curare morbos pulmonum! O quanto difficilior eosdem cognoscere, et de iis certum dare presagium! Fallunt, vel peritissimos, ac ipsos medicinæ principes. Tyrones mei cauti estote, et prudentes in iis curandis: nec facilem promittite curationem, ut nebulones faciunt, qui Hippocratem non legunt. Bagliyi Opera, Lib. I. pag. 34. Lugduni 1714.

30 OBSERVATIONS ON

THE natural alterations which happen in the course of many diseases, tend, in some measure, to free the body from the offending cause, or to correct what is amiss in the animal frame; and in such cases, the business of the physician is, to attend carefully to the operations of nature, to restrain them when violent, to excite them when languid, and in fine, not to check, but gently to guide and direct them. But when any of the vital functions, essential to life, are affected, the struggle, if not speedily terminated, must prove fatal. Other disorders are sometimes cured by the efforts of nature, without medical assistance; but in this, there is no resource; unless it is properly treated, at its very first appearance, it is seldom or never removed.

BUT, although no method of treatment has, hitherto, been found effectual, in that period which has been described as the second stage of the Asthma, yet in the first, or intermitting state, there

there are few diseases, to which medicine has been more successfully applied.

BUT, as the prognostics were various, according to the constitution of the patient, and other circumstances, it will be proper, in this place, to enumerate the signs that portend danger, and those by which we are encouraged to hope.

THE disease was most dangerous to very young children, and especially to those who had been lately weaned. Their delicate frame, already affected by the indispositions which naturally arise from a change of food, were soon overpowered by the addition of a disease in itself so violent.

IF the first paroxysms were very severe, of long duration, and the remissions short and imperfect, the cure might be reckoned more difficult; but as these circumstances were alarming, an early attention was paid to them, and therefore

fore the disease was oftener cured, when it appeared in that form, than when it stole on more imperceptibly, and approached towards the second period, before any danger was apprehended.

IF the asthmatic paroxysms were moderate, and of short duration, and an early attention was paid to them,—if the remissions were long, and became more distinct upon the application of the usual remedies, a favourable event might be prognosticated.

IF the urine was freely discharged, and in large quantities,—was turbid, and dropped a copious sediment,—if coughing or vomiting happened naturally; and the usual discharge of phlegm, and mucus from the nose followed,—if a gentle looseness came on,—if the inflation of the bowels subsided, and a mild diaphoresis ensued, a happy termination of the disease might with certainty be foretold. If the disorder was
far

far advanced before the physician was called, though the medicines applied should even then have so good an effect, as to put a stop to its progress, yet there was less probability of obtaining a perfect cure, than that the patient should, during life, be subject to periodical returns of the disease.

IF, notwithstanding an early and diligent attention to every symptom, the paroxysms returned more frequently, and the difficulty of breathing became continual, there was very little hope of succeeding in the cure; if the child became hoarse, breathed with a croaking noise, and the spasms in the diaphragm and abdominal muscles increased, the case became still more dangerous.

BUT if an attempt to swallow was attended with the hazard of suffocation,—if a profuse sweat broke out, accompanied with fainting,—if the extremities
D became

became cold,—if the eyes were lurid, the face livid, the lips, tongue, mouth and throat, dry and parched; and if the child was thrown into frequent and violent convulsions, it was easy to judge, that the case was then aggravated beyond all possibility of relief.

C H A P. V.

OF THE CURE.

SECTION I.

HAVING thus given some account of the constitution of the air, during the prevalence of the Asthma; having related its rise and progress, and taken notice of the signs, which peculiarly distinguish it from other diseases, and of those which promise safety, or threaten danger, I come now to a very important part of the subject, which, as well as the former, shall entirely consist of a simple narration of facts.

BEFORE I had any opportunity of making observations on this disorder, I had heard much of it, from the information of others. It was supposed to be an inflammatory disease, in which the progress of the symptoms was so rapid, as to terminate in suppuration or gangrene, in a few days. It had been treated by copious bleeding, and other evacuations, according to the antiphlogistic method, but without success. It was now looked upon as incurable; it was an object of terror to every parent, and the most anxious endeavours of physicians to remove it, had hitherto proved ineffectual. I was therefore resolved to consider it with the utmost care and attention; and it was not long before an opportunity offered. As the havoc it had already made, had spread the alarm universally, assistance was sought immediately, and I had the advantage of seeing it in the first stage, and even in the most early period.

AN attentive consideration of the appearances of the disease, and the circumstances attending it, afforded a probable conjecture, of its being immediately produced by spasm, rather than by a fixed obstruction: considering moreover, that the antiphlogistic method had already been tried in its full extent, and that nothing could be more unsuccessful, I determined to attempt the cure in a different manner, and had the pleasure to find it succeed.

I SHALL therefore proceed to give an account of the method which I then pursued, and of such improvements, as I have since learned from farther experience.

THE PRINCIPAL INTENTIONS WERE,

1. TO TEMPER THE VIOLENCE OF THE ASTHMATIC PAROXYSM.

D 3

2. WHEN

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2. WHEN A REMISSION WAS PROCURED, TO PREVENT A RETURN OF THE ASTHMATIC FIT.

3. TO RESTORE TO THE RELAXED FIBRES THEIR PROPER TONE.

1. To remove the Asthmatic paroxysm, a small quantity of blood being previously taken, musk was prescribed in large doses. It proved anodyne and diaphoretic: the spasms were allayed, a gentle moisture was universally diffused over the body; the pulse became slow, full and regular, and a remission of all the violent symptoms ensued.

THE diaphoresis was promoted by small doses of spiritus mindereri, frequently repeated; and the simple oxymel, or when it proved ineffectual, that of squills, was given to promote a discharge of phlegm.

2. To

2. To prevent a return of the paroxysm, a blister was put between the shoulders*; emollient fomentations were directed for the stomach and belly; anodyne liniments were rubbed on these parts, and applied externally to the fauces and throat; antispasmodic clysters were injected; and a caution was given, that the air the child breathed, should not be infected with smoke or sulphureous steams, and that it should, as much as possible, be constantly preserved in a moderate temperature.

3. ALTHOUGH the two former indications were thus happily fulfilled, something more was necessary to render the cure compleat and permanent; for when particular attention was not paid to every symptom, the bronchial vessels were

* The efficacy of blistering in removing pains and spasms is universally known, and is agreeable to an observation of Hippocrates.

Δύο πόνων ἅμα γινομένων, μὴ κατα τον αὐτὸν τόπον, ὁ σφοδρότερος ἀμαυροῖ τον ἕτερον.

Sect. 2. Aphor. 46.

often much injured, and the stomach and intestines so much weakened, as to render the patient ever afterwards subject to periodical returns of the disease, which, though they were not so violent as to endanger life, were yet so severe, as often to make it extremely uncomfortable.

THIS misfortune happened only when the parts affected by the disease having lost their natural tone, were long retained in a preternatural situation; the obvious method, therefore, of guarding against this evil was, by bracing the habit in general, and restoring to the relaxed parts their usual tone.

THE bowels were strengthened, and the cause of their distention removed, by very gentle laxatives, joined with aromatic, carminative, and astringent medicines; and for that purpose magnesia, rhubarb, the species aromaticæ, and sal martis, were used successfully.

BUT

BUT in every respect a strict regulation of diet was of great importance, and contributed very much to confirm the cure, as well as to prevent a relapse; such light food was therefore prescribed, as might be easily converted into nourishment, without occasioning acidity and flatulence in the first passages, or such crudities in the other digestions, as might render the circulation of the blood through the lungs more difficult.

SECTION II.

AS I have all along confined the order of this narrative to that in which the events fell out, I have hitherto only recounted the manner of treating the disease which I first adopted; but after more experience, several improvements were made, and the method of cure was rendered more certain and compleat.

AT first, bleeding was prescribed, with a view of alleviating the most violent symptoms ; and it had, in some measure, the effect, though the respite it procured was only temporary, the paroxysm returning with greater violence ; and when even a small quantity of blood was taken, the effect of other medicines was neither so immediate nor certain. Finding, therefore, that no benefit could reasonably be expected from a remedy, which, under the appearance of mitigating the violence of the symptoms, had, upon the whole, a tendency to aggravate the disease, it was in the sequel entirely laid aside.

THE coldness of the extremities suggested the application of acrid cataplasms to the feet, which brought on a brisker circulation in these parts, and promoted an universal warmth, which was generally succeeded by an agreeable moisture diffused over the whole body.

THE

THE disease was sometimes so violent at the first attack, and the transition to the second stage so rapid, that it required a medicine which should operate more immediately and powerfully than musk had usually done; for this purpose assafœtida was prescribed, and with so good effect, that in my later practice, it has in a great measure superseded the use of musk.

AN ounce of this gum has sometimes been taken by a child of eighteen months *, in the space of 48 hours, and almost as much at the same time injected in clysters; allowance being made for the residue of the gum, which is lost in making the solution.

THE following is the form in which assafœtida was commonly prescribed.

R Gummi assafœtidæ drachmas duas.

Spiritus mindereri unciam unam.

* Vide Case 2.

Aquæ

Aquæ pulegii uncias tres.

Fiat solutio, S. A.

A TABLE spoonful of this mixture was given every half hour. If the child was very young, or delicate, a smaller quantity was ordered; but if strong, and of more years, two spoonfuls, or even a larger quantity was given. But this large dose was not persisted in, if it occasioned much vomiting or purging; and was always diminished, when the most urgent symptoms were removed.

THIS medicine is extremely penetrating, and when it is used for some time, the breath, urine, and all the excretions are flavoured by it. However nauseous it may seem to be, children seldom refuse it; and even when they have some aversion to it, if they are obliged to take it, they soon acquire a taste for it, and not only use it without reluctance, but with pleasure.

BUT

BUT in order to guard against every accident, at the same time that it was prescribed internally, an assafoetida clyster was ordered to be injected every eight hours, till the paroxysms became more moderate. This was the usual form.

R Gummi assafoetidae drachmas duas.

Decocti communis pro clystere uncias tres.

Olei olivarum unciam unam.

Fiat enema, S. A.

THIS small quantity of the decoction was used, that it might not be too quickly discharged, as it was observed to have a better effect when it was some time retained *.

* The method of exhibiting medicines by way of clyster has long been generally practised; but external application has lately been recommended by Dr. Pye, in the second volume of the London Medical Observations, and by Mr. Alexander, in his Experimental Essays; the medicinal virtues of assafoetida cannot be so well conveyed in that manner, but a strong decoction, or infusion of the bark, may probably be thus used with advantage.

AFTER

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AFTER procuring a remission, the Peruvian bark * was found, when regularly taken, to be extremely useful, for by means of it, a return of the Asthmatic fit was prevented; the danger of its becoming an habitual disease obviated; any injury which had in the course of the illness been done to the organs of digestion, or respiration, was repaired; the relaxed fibres recovered their usual tone, and the whole habit was strengthened.

IT was usually prescribed in the following manner.

*R. Aquæ menthæ piperitidis simplicis
drachmas sex.*

*Corticis peruviani subtilissime pulve-
rati scrupulum unum.*

Syrupi cariophyllorum drachmas duas.

F. Haustus.

* For the first information concerning the use of the Peruvian bark in this disease, I am obliged to Mr. Walter Gibson, Surgeon in Leith.

THIS

THIS dose was, during the remission, repeated once in two, three, or four hours, according to the exigence of the case; and if a return of the Asthmatic paroxysm was suspected, the solution of assafoetida was still continued occasionally.

C H A P. VI.

SINCE general accounts of diseases have not always been reckoned satisfactory *, I shall, in order to explain the application of the method of cure in particular instances, subjoin a few cases, selected from a great number of those, of which I have kept an exact journal ; it would be needless to relate many, as the symptoms were alike in all, and the manner of treating them was similar, the following, are

* Neque enim satisfaciunt ad exactam cognitionem universales methodi. Sunt autem exemplorum ea pro potioribus habenda, quæ ipsi oculis usurpavimus : quando si omnes, qui docere, scribere aliquid sunt aggressi, ea prius operibus ostendissent, prorsus paucula quædam falso dicerentur. Galenus Methodi Medendi, Lib. ix. Tomus tertius, pag. 1214. Lugduni 1214.

such

such as have occurred, since the latest improvements were made in the cure.

CASE I.

A CHILD four years old, was observed on Monday evening the 15th of March, 1762, to have a tickling cough, and to breathe with some difficulty. These symptoms increased gradually, without occasioning any suspicion of danger, till Tuesday afternoon, when they were exceedingly aggravated: respiration then was become extremely difficult, and attended with a hard, disagreeable, croaking sound, a heaving of the shoulders, and a convulsive motion of the abdominal muscles. In hopes of removing these violent symptoms, 14 ounces of blood were taken, without any proper advice; he seemed somewhat relieved by the bleeding, but the symptoms soon returned with greater violence; an assafoetida
E
clyster

clyster was then injected, and retained, the stomach and belly were fomented, and rubbed with a camphorated liniment, but no medicine was given internally.

A B O U T six in the evening, I first saw him, and was informed of the foregoing circumstances. His pulse was then low and feeble, he had passed very little urine, and with some difficulty, it was pale and clear; the blood was florid, the crassamentum had little cohesion, the serum was turbid, and of a darker colour than usual, he breathed with great agony, and with a croaking noise, his face was livid, his lips of a black colour, his eyes sunk, and half shut, his extremities were cold, and he was often thrown into convulsive motions. Though in such a situation little could be expected from medicine; yet, as assafoetida had often been used successfully, in cases that seemed very desperate, I directed it to be given in
large

large doses, and often repeated. After taking it, he discharged a great deal of wind, and seemed somewhat relieved, but the violent convulsions soon returning, he died in a few hours.

CASE II.

A BOY, aged 18 months, in perfect health and great spirits, was, on the morning of the 26th of January, 1766, suddenly seized with great difficulty of breathing; it was so much increased at nine o'clock, next morning, when I first saw him, that he seemed to be threatened with instant suffocation; his face was of a livid colour, his pulse weak, low and quick; his extremities were cold; there was a violent convulsive motion in the abdominal muscles, and his stomach and intestines were much inflated.

A TABLE spoonful of the assafœtida solution was ordered to be given every half hour, an assafœtida clyster was immediately injected, a blister was applied between the shoulders, and the stomach and belly were fomented and rubbed with a volatile liniment. After the clyster operated, he seemed relieved, but the difficulty of breathing soon returned, and continued almost without intermission through the whole day: he had, however, more natural heat over his body, and his face (tho' extremely florid) was not of that livid colour, which had formerly been observed.

IN the evening he passed a great deal of wind, and was much relieved; the remissions were now longer, and the paroxysms less severe; he rested well in the night, and appearances were better on the morning of the 28th; a scruple of Peruvian bark was then ordered to be given every two hours, during the remif-

remission, and the assafoetida solution to be continued occasionally upon the accession of the Asthmatic paroxysm.

IN the evening his pulse, which had been so quick and feeble, that it could not be reckoned, was stronger and firmer, and beat a hundred and twelve pulsations in a minute. Another clyster was then injected. In the beginning of the night he vomited frequently, and purged twice, but afterwards rested well.

ON the morning of the 29th, he was much easier, his pulse beat a hundred and four times in a minute; but as he breathed, still, with some difficulty, directions were given to continue the same medicines.

ON the morning of the 30th, he seemed perfectly well; but in order to strengthen the habit, and prevent a re-

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lapse, two or three doses of the bark were ordered to be given every day, till his strength should be perfectly restored.

FROM the 27th to the 29th, he took an ounce of assafoetida, and six drachms were injected in clysters, and in the intervals, during that time, he took ten scruples of the Peruvian bark.

C A S E III.

ON the evening of the 28th of February, 1764, I was called to a child of 18 months, who had been weaned about four months. From the croaking sound of her breathing, I could easily pronounce her disease to be the Asthma, even before I entered the house.

SHE had been observed to breathe with some difficulty a day or two before,

fore, but that being attributed to cold, was not thought worthy of any attention. On the night of the 27th, she had a severe Asthmatic fit, which alarmed her mother greatly, as she had formerly seen the disease in two other children of her own, and lost one of them by it; next morning, the child was so well, that it was imagined the disorder had entirely left her, but it returned with greater violence in the evening of the 28th, and then it was that I first saw her.

HER body was all over chill and cold, her pulse weak and low, and so quick, that it could not be reckoned; her face much flushed, and her breathing extremely laborious. A leech had been put upon her neck, but little blood lost; and a blister was applied between the shoulders.

THE same medicines were prescribed as in the former case ; (No. 2.) in a short time she was warmer, breathed easier, and her pulse became firmer and stronger. She took through the night two drachms of assafoetida, and a clyster, in which the same quantity had been dissolved, was injected ; she threw up a great deal of phlegm, and purged three times.

ON the 29th in the morning she still breathed with difficulty, but not with such a croaking noise. As the blister had not operated, another was applied to the side, and a table spoonful of a decoction of the Peruvian bark was directed to be given every hour. At night her pulse beat 144 in a minute, and was rather lower than in the morning, and therefore stimulating cataplasms were applied to the feet ; she complained of the pain, and made shift to get them away, but they were again applied, and kept on during the night.

ON

ON the morning of the first of March, her pulse had more strength, and she breathed with less difficulty, though not quite freely. From the beginning of the disease, there had been no discharge of mucus from the nose, but it now begun to run freely. She had passed little water, and it was pale and limpid, but now became turbid, and deposited a light sediment.

THE decoction was still continued, and the assafoetida solution given occasionally; a solid diet was recommended, and an abstinence from every thing flatulent enjoined. On the 2d, she seemed perfectly well, her pulse was now become slow and firm, and she passed water freely, and in due quantity. The former regimen was continued, and the bark directed to be given for a few days, but the assafoetida was omitted, as it seemed now no longer necessary.

C H A P. VII.
OF THE DISSECTIONS.

AN account of the morbid appearances in bodies after death, has ever been reckoned necessary to complete the history of diseases, and such an enquiry is no doubt highly useful, when joined to other circumstances, from the first appearance of the disorder, to its fatal period ; but when so much is expected from dissections, as to encourage a want of attention to the rise and progress of diseases, or when the morbid appearances in the dead body, are set in opposition to the information obtained from an accurate observation of the symptoms, and of the methods

methods of treating the disease, that have been attended with success, and of those by which it has been aggravated, then it is that, according to an observation of Celsus *, their use is perverted, and instead of conducting us to a rational method of cure, they only amuse with idle speculations, and lead us into error.

THESE reflections naturally arise from a comparison of the morbid appearances which are found in the dead body, with the history already given of the Asthma; when taken together, they admit of a simple and easy explanation, and mutually illustrate each other; when divided, or set in opposition, they distract the judgment, and mislead us greatly in forming an opinion of the disease.

* Neque quidquam est stultius quam quale quid vivo homine est, tale existimare esse moriente, imo jam mortuo, Lib. I. In præfæt.

THE

THE same effects are produced in human bodies, from very different causes; and it is only by attending to the antecedent circumstances, and comparing the consequences naturally arising from them, with those morbid appearances, discovered by dissection, that any just inference can be drawn.

Thus there have been two different stages described in the foregoing account of the Asthma, and it is obvious, that the appearances after death must vary, according as the fatal period has happened, in one or other of these stages. In the first, we ought to find the lungs perfectly sound; but in the second, very different appearances may be expected, such as arise, from an accumulation of the natural mucus, from obstruction, from ruptured vessels, and from a gangrene in these parts.

THE

THE only dissection I ever made in this disease, was of a child who died in the first period.

THE external parts were lax, soft to the touch and œdematous, the lungs were perfectly found, as were all the other bowels, the stomach and intestines were much inflated, and contained almost nothing, besides the great quantity of rarefied air, by which they were exceedingly distended.

THO' I never dissected any of those who died in the second stage, yet I have the most authentic testimony of the appearances being very different in that period.

I SAW a child in the latter stage of the Asthma, who, after labouring under the most violent symptoms of it, died, as far as I can recollect, about the tenth day; I could not attend at the dissec-

dissection, but was informed by the gentlemen who were present, that the vessels of the pleura, on the surface of the lungs, and of the trachea, were turgid, and seemed obstructed, that the parts had a livid appearance, resembling that which is observed, when an inflammation terminates in a gangrene, and that the bronchial vessels were filled with a white tough gelatinous substance.

IF then a physician should be called in at the latter stage, though he should attend, with the greatest accuracy, to every circumstance, and though, in order to assist him in discovering the nature of the illness, he should enquire into the morbid appearances after death, it is easy to see how much he might be deceived, by seeing one stage only of the disease, and how, by forming a wrong notion of the case, he might be misled in future practice; and yet when
this

this instance is compared with the dissections in the early stage, and other circumstances, how much does it tend to illustrate, and to complete the history of the disease.

CHAPTER I.

OF THE CAUSE OF THE
ASTHMA.

I COME now from the foregoing narrative, and other materials, to inquire into the cause of the Asthma.

Such relations have not indeed been generally successful, and it is not to be expected that we should be more fortunate in discovering the immediate cause of a disease, which has hitherto been almost entirely overlooked. In fact, the more curious and important

PART

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PART II.

CHAP. I.

OF THE CAUSE OF THE
ASTHMA.

I COME now from the foregoing narrative, and other materials, to inquire into the cause of the Asthma.

SUCH researches have not indeed been generally successful, and it is not to be expected that we should be more fortunate in discovering the immediate cause of a disease, which has hitherto been almost entirely overlooked. In fact, the inquiry is more curious than important, since it is not material to know what
has

has occasioned a disease, but what will cure it *. I shall, therefore, without entering into an unprofitable investigation of intricate questions, proceed to point out the more obvious causes which have been discovered by attentive observation.

FROM the history which has already been given of the Asthma †, it appears, that it is chiefly incident to children, especially such as have been lately weaned, and that it has been most prevalent in spring and autumn, moist seasons, changeable weather, and when the Mercury stood low in the barometer.

HOWEVER unsatisfactory the conjectures may be, which have been formed concerning the influence of a light at-

* Alii putant interesse non quid morbum faciat, sed quid tollat.—Neque quærendum esse quomodo spiremus, sed, quid gravem tardumque spiritum expediat. Celsus, Lib. I. in Præfat.

† Part I. Chapter I. page 13, 14, and Chapter II. Section I. page 17.

F

mosphere

mosphere in producing diseases, yet the fact stands confirmed by the concurring testimony of physicians in all countries, and in all ages; an extraordinary instance of the lungs being affected by such a constitution of air, is related by Dr. Mead, in his treatise concerning the influence of the sun and moon upon the human body *; and if we have not
been

* Memorabilis est tum morbi, tum eventum etiam ratione, qui eum comitabantur, Pitcarnii ipsius casus. Is cum in Scotia haud procul Edinburgo ruri esset, Anno 1687, mense Februario, cœlo solito magis sereno et rubente sole, in ipso lunæ coitu subitum habuit sine causa manifesta sanguinis e naribus profluvium, quod præesset gravis insolitæ virium imbecillitatis sensus, postridie autem in urbem reversus comperit in baroscopio ea ipsa hora, quæ nona fuit matutina, altius subsedisse Hydrargyrum, quam alias unquam descendere aut ipsi, aut amico suo Gregorio, cujus in ædibus adservabatur, visum fuerat; mortuum etiam eodem tempore concidisse alterum amicum Cockburnium, philosophiæ professorem, ex repentina sanguinis e pulmone eruptione; et quinque aut sex alios familiaritate sibi conjunctos, qui opem ipsius quavis ægritudine afflicti implorare solebant, diversis humorum profusionibus tentatos, cum magno suo dolore

been grossly deceived by the relations of travellers, the sudden change from a dense to a light atmosphere, in ascending high mountains, renders respiration extremely difficult.

THESE extraordinary effects of the different changes of the atmosphere will not appear surprizing, when we consider, that the pressure of the air upon our bodies is, in some particular circumstances, equal to 32,000, and in others amounts only to 16,000 pounds*.

THE qualities of the air vary also exceedingly even in the same place at different times; and no where more remarkably than in this island; we may therefore conclude, that here diseases must depend greatly upon the state of the atmosphere.

lore intellexit. De imperio Solis ac Lunæ, pag. 49, 50. Londini 1746.

* Arbuthnot on Air, Chapter iv. Section X. page 75, London 1751.

HIPPOCRATES, who has treated this subject with the greatest accuracy, not only refers the cause of diseases to the influence of the climate, but to that he also attributes the temper, manners and customs, laws and government of the inhabitants of the different quarters of the world *.

BUT whatever influence the air may have upon animal bodies, the lungs must, in a particular manner, be affected by it, since their inward surface is commensurate to an expanse of air many times larger than the animal †.

IT would be improper, in this place, to enter upon a general discussion of the effects of air on human bodies, it may be sufficient only to observe, that in a light atmosphere, the spring or elasticity of the air is weakened, and is thereby

* De Aere Aquis et Locis passim.

† Hales Hæmastatics, page 239, Experiment cix.

rendered unfit for the due expansion of the lungs, the usual secretions are diminished, and diseases arising from a laxity of the fibres are prevalent *.

WHEN moisture is joined to such a state of air, it becomes still more injurious, the superfluous serum which ought to be thrown out by expiration is accumulated, the fibres become turgid and œdematous, and the organs of respiration are weakened †.

* Mr. Cleghorn, in treating of the diseases in Minorca, remarks, that the south and south-east winds are by much the most unhealthy. In whatever seasons they blow, the air is foggy, and affects the breathing. Third Edition, page 6.

† Thus Sir John Floyer observes, that in rainy weather, or toward snow, and in the foggy, he was frequently sensible of a great straitness at the stomach, from which he infers, that such weather gives an inclination to the fit before either the rain or snow fall; and a little afterwards he adds, that he always, upon unexpected fits, found some great change of weather to succeed. Treatise of the Asthma, page 17. London 1698.

SUCH are the common effects of a moist and light atmosphere, but it must operate still more strongly on children, they have naturally lax fibres, they abound with ferous humours, the delicate texture of their vessels is not calculated to resist the expansion of the internal air, which must take place when the pressure of the atmosphere is diminished, their tender bowels are still less adapted to overcome the rarefaction of the air, which is generated in the digestion of their food, and their lungs thus weakened and relaxed, are unfit for the due performance of their usual functions.

BUT these are not the only circumstances by which children may be rendered liable to the Asthma; about the time at which it is most incident to them, great changes happen in their bodies; the blood in a foetus circulates through the foramen ovale, and canalis arteriosus; but in adults the membrane, which
served

served as a valve to the foramen, adheres firmly to its margins, and entirely shuts up that passage, and the canalis arteriosus becoming impervious, is converted into a ligament *.

THE union of these parts is generally completed in a short time after birth; but there are some instances where this passage has been found open at a more advanced period of life †, and the change is not always accomplished, without occasioning some disorder in the human frame.

* Vide Lower de Corde, page 54, 55, 56, Londini, 1669.

† Manet tamen foramen ovale in adultis aliquando pervium, Pinæus ter observavit, semel Riolanus, et nos non simplici vice. Botallus in vitulis, suis, canibus, majoribus sæpissime, unde semper et naturaliter patulum voluit, cujus vestigia premens Cœcilius Follius in omnibus hominibus secundum naturam eodem fine ut in foetu apertum credit, sed repugnante experientia. Apertum tamen tantum est, cum alias vias occlusit natura. Thomæ Bartholini Anatomia Reformata de vasorum Cordis unione, Lib. II. Cap. viii. pag. 276. Hag. 1655.

THUS Morgagni relates a case where this alteration in the animal œconomy did not succeed as usual, and where an habitual Asthma was the consequence*.

THE change of food also, which takes place at that time, may be considered

* Virgo quæ ab nativitate usque semper ægro-
tans jacuerat, ob summam presertim virium lan-
guorem, anhelans respirabat, et tota cute colore
quasi livido infecta erat. Tandem cum ad annum
circiter decimum sextum pervenisset, mortua est.
—Cor habuit exiguum, et mucronem versus quasi
subrotundum. Patebat foramen ovale, ut mini-
mum digitum posset admittere.—Erant autem ad
illud foramen quædam exiguæ productiones carneo
membranosæ, ea ratione collocatæ, ut valvularum
vices supplere possunt, egredienti sanguini ceden-
do, regressuro autem obstando.

Huic etiam virgini jam inde ab initio fuisse in-
choamenta crediderim, ejus vitii ad ostium arteriæ
pulmonalis, cui vitio, sensim magis magisque a-
daucto, omnia quæ vivens patiebatur, et quæ in
mortuo deprehensa sunt, accepta facile sunt refe-
renda.—Quod autem in hac virgine sensim, et a
primordiis, cum laxiora adhuc erant omnia, fieri
cœptum est.

Morgagni de Causis et Sedibus Morborum Edi-
tio Secunda Patavii, 1765. Epistola Anatomica,
Medica xvi. Art. 12, 13, pag. 133, &c.

as an additional cause of the disease; when a child is fed with milk alone, his food is easily assimilated, but when a diet less animalised is to be converted into nourishment, much air is generated in the first passages, by which the diaphragm is forced upward, the chest is straitened, and the breathing becomes laborious.

To all this we may add, that the bronchial vessels have not yet acquired so much strength and elasticity, as at a more advanced age, and are therefore more easily injured by the changes in the atmosphere, and by these alterations in the animal œconomy.

C H A P. II.

REMARKS ON PASSAGES, RELATING
TO THE ACUTE ASTHMA, WHICH
OCCUR IN THE WRITINGS OF PRAC-
TICAL PHYSICIANS.

HAVING thus finished our obser-
vations on the acute Asthma, it
will now be proper to consider the ac-
counts of it, which have been transmit-
ted to us by former writers, for though
no complete history has ever been given
of the disease, yet there are several ob-
servations concerning it, scattered thro'
the writings of practical physicians.

HIPPOCRATES, after enumerating the
diseases to which infants are liable, pro-
ceeds to mention those which are inci-
dent

dent to children at a more advanced age, and amongst these he ranks the Asthma *; and Galen, in his Commentary upon that Aphorism, enlarges upon the subject, and endeavours to explain the causes of the disease †.

HIPPOCRATES also, in another place, mentions it as a disorder incident to children, observes, that it is occasioned by cold and moisture, and hints at its being confounded with the epilepsy, or morbus facer ‡.

CÆLIUS

* Aphorism 26. Sect. III.

† Jam vero Asthma fit ob angustiam eorum, quæ sunt in pulmone, ventriculorum. Hæc vero angustia fit, repleto viscere ab iis, quæ desuper veniunt, defluxionibus. Nam et ex utero ad aerem ambientem transitus, et alimenti mutatio, eos omnes imbecilles reddit, si ad hæc etiam fluxiones ad pulmonem accesserint, nequaquam sustinere possunt. Galeni Commentarius in Aphorismum Hippocratis 26, Sectionis tertii.

‡ In his book de Aere, locis, et aquis, treating of diseases occasioned by cold and moisture, he observes, τοῖσι δὲ παιδίοισιν, ἐπιπίπτειν σπασμοῖς καὶ

CÆLIUS AURELIANUS seems likewise to have understood this disease better than most of his followers; he observes, that it is more incident to men than women, to old people and children, than to those of middle age; to delicate than robust constitutions; that it is more frequent in winter than in summer, and that it usually attacks the patient in the night; the paroxysms are often violent, and to some it is incident from their earliest infancy. It is chiefly occasioned by intense cold, and is

καὶ ἄσθματα, ἃ νομίζουσιν τὸ παιδίον ποιεῖν καὶ ἱερὴν νοσον εἶναι.

Some of the antients applied the term *ἱερός νοσος*, or *morbus sacer*, to every violent disease, by which their skill was baffled, pretending that mankind were afflicted with such diseases as a punishment; but Hippocrates declares against referring any disease to the displeasure of the gods, and affirms, that such pretences were made use of to cover ignorance and imposture. Ἐμοὶ δέδοκέουσιν οἱ πρῶτοι τῆτο τὸ νόσημα ἀφιερύσαντες, τοιοῦτοι εἶναι ἄνθρωποι, οἷοι καὶ νῦν εἰσὶ μάγοι τὲ καὶ κατάρται, καὶ ἀγύρται, καὶ ἀλαζόνες ὁκόισοι δὴ προσποιέονται σφόδρα θεοσεβέες εἶναι, καὶ πλέον τὶ εἰδέναι.

frequently

frequently in its nature an acute, rather than a chronic disease *.

ETMULLER offers some conjectures concerning the cause of the Asthma in children, gives some practical directions relating to the cure of it, and chiefly recommends vomiting †.

DR. Harris has likewise described it, and observes, that it is often fatal to children; but since this is perhaps the

* Gravata autem Asthma atque premit magis mulieribus viros, et Juvenibus senes, atque pueros, et durioribus natura corporibus teneriora, hyberno atque nocte magis, quam die vel æstate: in quibusdam ex initio generatur: in quibusdam perfectis irruit passionibus; sed magis ex profundo frigore sequitur patientes spirationis difficultas, et frequenter natura celerior magis quam tarda. Chronion Liber tertius, Cap. I. de suspirio, sive anhelitu quem Græci Asthma vocant, p. 71, Basileæ, 1529.

† Infantum Asthma ut plurimum ex ventriculo onerato oritur, dum mucilagines acidæ coacervatæ, et flatulenta turgescencia tumefactæ, molestum tale Asthma producant: hinc enim etiam provocato vomitu liberantur.—Dissertatio X. de Valetudinario Infantili, pag. 125, tom. 2d. Londini 1688.

only

only instance of his referring their diseases, to any other cause besides acidity, it is probable, that his attachment to a favourite hypothesis, prevented him from informing himself more fully concerning the Asthma*.

* Sed et idem anhelat, et cum stertore aures astantium feriente nonnunquam spiritum ducit, quod quidem symptomate semper laborare deprehenditur (maxime si carnosior sit) cum morbus in acutorum partes transit. Porro tussicula levi, eaque sicca, et nonnunquam suffocativa, sæpius urgetur: sicca quidem tussi ob acrimoniam humorum ramulos asperæ arteriæ valde sensiles perpetuo vellicante, suffocativa autem propter Bronchia Pulmonum serositatibus in ea depluentibus, neque exitum invenientibus gravissime onusta. Quinetiam quia nervosi generis maximam debilitatem habent, atque molitie temperiei summa ac delicatula sunt donati, ideo vim tussiendo molestissimam ferre nequeunt, atque agitationi pectoris violentæ, quasi suffocati, et nigricantes facie, fere succumbunt. Tractatus de Morbis acutis Infantum Genevæ, 1727. Quarto, pag. 10.

Here Dr. Harris affirms, that coughing aggravated the disease; but this must have been at a very advanced stage, since, on the contrary, I have generally observed at least a temporary relief from it, and have often seen the paroxysm removed by coughing.

DR.

DR. James Simpson, in an inaugural dissertation de Asthmate Infantum Spasmodico, gives a plain description of the disease, and reasons ingeniously concerning the cause of it; but the conjectures, upon which his method of cure is founded, do not appear to be sufficiently supported by practical observations *.

* After describing the usual symptoms of teething, he adds, “ Aliter autem se res habet in aliis, quibus nimirum a suctu aut aliis causis infirmior est Larynx, his enim primo quasi impulsu dentis acerbiter ita afficitur Larynx, ut ilico conjiciatur infans in atrocem Asthmatis paroxysmum cum clangore furdo, cui ni adsit presens remedium, uno quasi impetu miserum pessundat. Sed si post accessionem primam, remittit morbus, ut sæpius fit, nondum omnia tuta sunt: vi enim primi illius assultus, malo adeo opportunum redditur corpus, ut quævis agitatio vehementior, ex risu, tussi, aut aliunde, morbum non satis profligatum denuo accersat, et periculum hoc toto dentitionis tempore immineat, præsertim si neglecta aut intermissa fuerunt medicamenta idonea, pergit sæpe morbus hic absque ulla tussi, interdum tamen comitante tussicula leviori et sicca. Evanefcente paroxysmo, ad fauces confluentis humor, manifeste indicat, jam relaxari partes vicinas, morbumque ibidem fuisse spasmodicum. Dissertatio Medica Inauguralis de Asthmate Infantum Spasmodico. Edinburgi 1761.

DR.

DR. Home describes the latter stage of the Asthma, in his inquiry into the nature, cause and cure of the croup, or suffocatio stridula, and has with great industry collected a variety of cases to illustrate the history of the disease; but it seems probable, that he has seldom seen the first stage of it, since most of the symptoms which he relates are peculiar to the second, as are also the morbid appearances which he found in the body after death*.

MANY other passages relative to this subject might be quoted, but since they could not contribute to the further explication of the disease, nor instruct us in the method of cure, it is needless to cite more of them; some of those already adduced are as antient as the earliest regular records of diseases, and all of them, so far as such slight observations extend, seem to demonstrate, that

* Inquiry into the nature, cause, and cure of the Croup. Edingburgh 1765.

the disease here described, has in all ages been universally prevalent.

THAT it has not been thoroughly investigated, nor the method of treating it completely ascertained, is not at all surprising, considering how difficult it is to obtain any rational information concerning the diseases of infants, and how little is to be learned from common observation. A physician can seldom afford so much of his time to the consideration of any one disease, as is absolutely necessary for acquiring a competent idea of the Asthma; and if he forms his opinion of it from the information of those who have the care of children in early infancy, it is impossible that he should not be grossly misled.

BUT this is not peculiar to the disease, of which we have been treating; from the same cause we are to account for the general mortality amongst children in other disorders.

SOME physicians, discouraged by these circumstances, and dissatisfied with their want of success, have abandoned this necessary and useful branch of their profession; by this means the evil has been increased; the little sufferers have been delivered over to ignorant persons, and sometimes subjected to all the tortures of a bold and cruel empiricism.

ACCORDING to an ingenious calculation *, half of the children in London die under five years; if this be the case, it affords a melancholy proof of gross mismanagement, for it cannot be sup-

* See an elegant essay on the advantages of early inoculation in the London Medical Observations, Vol. III. page 300. See also a comparative View of the State and Faculties of Man, with those of the Animal World, page 20. This author makes the calculation somewhat lower; one half of mankind, he says, die under eight years old; but this difference may be easily accounted for, from Dr. Maty's having confined his calculation to a large city, where the mortality must be considerably greater than in the country.

posed

posed to be the necessary lot of humanity ; on the contrary, though children are subject to some inconveniences peculiar to that early period of life, yet they are exempt from a long train of disorders incident to grown persons, from luxury, intemperance and debauchery.

WE may therefore conclude, if physicians were equally instructed with respect to the diseases of children as those of adults, they would be equally successful in curing them.

BUT it is unnecessary to dwell on this subject, principles of humanity, of political œconomy, and indeed every motive which can influence a benevolent mind, concur in pointing out the necessity of a remedy for this growing evil. The principal and most eligible remedy is a careful attention to the prevention of diseases, and for this purpose some general precepts and cautions are delivered in the following chapter.

C H A P. III.

THE PROPHYLAXIS, OR MEANS OF PREVENTING THE ASTHMA IN CHILDREN.

SINCE the Asthma is always attended with imminent danger, it is very desirable to know by what means it may be prevented; and as the method to be pursued for this purpose tends to the general preservation of health, it ought to be universally followed. Some of the causes have been pointed out, and in counteracting these the prophylaxis will chiefly consist.

IT IS INCIDENT TO CHILDREN.

I. FROM THE LAXITY OF THEIR SOLIDS.

2. THE

2. THE NATURE OF THEIR FOOD.

AND,

3. THE WEAKNESS OF THE ORGANS OF DIGESTION.

EACH of these require a particular consideration.

1. A MORBID laxity of the solids may be prevented by the habitual use of the cold bath. In children, during their growth, the parts are often irregularly and too luxuriantly stretched out, the belly swells, and the child becomes œdematous and rickety; to guard therefore against these evils, cold bathing should be constantly used. It is, indeed, a common practice to wash children with cold water from their infancy, but it is often neglected as they grow up, when it becomes still more necessary. If however the child has not been accustomed to it, he ought to be gradually reconciled to the use of it, by

which means the bad effects which are sometimes occasioned by the terror of a sudden immersion are obviated, and he not only bears it without reluctance, but takes pleasure in it*.

BUT

* Dr. Huxham delivers some useful precepts concerning the cold bath. Nothing, says he, more effectually strengthens weak lax fibres than cold bathing. By this, weak, flabby, rickety children are soon invigorated as it were to a miracle. Indeed, in the times of ignorance, when the priests were knaves, and the people fools, many a well was sanctified for nothing but pure cold water, the virtues of which the miracle-mongers wholly attributed to a saint of their own making. *Essay on Fevers*, page 30, second edition.

M. Tissot also recommends it in the strongest terms.

La base de la santé c'est la régularité avec laquelle se fait la transpiration ; et pour parvenir à ce point important, il faut laver les enfants, peu de jours après leur naissance, avec de l'eau froide, telle qu'on l'apporte de la fontaine.

Il faut les laver très régulièrement tous les jours, quelques temps et quelque saison qu'il fasse, et dans la belle saison les plonger dans des seaux, dans des bassins de fontaine, dans des ruisseaux, dans des rivières, dans le lac.

Après

BUT as it is not always attended with the same success, it is necessary attentively to remark its effects. If the child has a glow of heat over him immediately after bathing; if he becomes active, chearful and lively, and his strength increaseth, it may safely be concluded, that he will receive much benefit from it.

BUT on the contrary, if he is dull and dejected, and grows weaker; if the skin becomes hard, dry and scaly, and his appetite voracious, and if a lientery su-

Après quelques jours de pleurs, ils s'accoutument tous si bien à cet exercice, qu'il devient un de leurs plaisirs, et qu'ils rient pendant toute l'opération.

Le premier avantage de cette méthode c'est d'entretenir la transpiration, et de rendre moins sensible aux impressions de l'air, mais de ce premier avantage il en résulte qu'on les préserve d'un grand nombre de maux, surtout de la nouvre, des obstructions, des maladies de la peau, et des convulsions, et on leur assure une santé ferme et robuste.

Avis au peuple sur sa santé, Chapitre xxvii. du lavage des enfants, page 465, 467.

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pervenies, it is then certain that no good can be expected from it.

2. WHEN children are on the breast, very little care is taken to prepare them for a change of diet; their first food, more than half animalized, is easily converted into nourishment; and as it operates as an emetic, as well as a purgative, an accumulation of vitiated humours, in the alimentary canal, is prevented. But when a substance, the most remote from the animal juices, is to be converted into nourishment, acidity and flatulence are generated in the first passages, and crude viscid humours in the other digestions. The child is moreover often tormented with excruciating gripes, and a wasting diarrhœa.

IN order to prevent these inconveniences, the change should be brought about gradually, and the diet, instead of pap which is commonly used, should
consist

consist of a due mixture of animal and vegetable food, so blended as to afford some variety, and mutually to correct the bad effects which arise from an excess of either. The one is nourishing and easily assimilated, but renders the body costive, and occasions inflammatory and putrid diseases. The other causes a looseness and gripes, and disposes to the scrophula, rickets, and such disorders as proceed from crude unassimilated juices; but by a due mixture of both, all these inconveniences are prevented.

THE proper food for this purpose is the juice of meat freed intirely from fat—weak broths—the lightest animal food—ripe fruits—and such vegetables, as are least productive of flatulence and acidity.

3. THE alimentary canal is strengthened, and digestion promoted by the use
of

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of magnesia alba, rhubarb and species aromaticæ, the former corrects the acidity which prevails universally in children, and keeps the body regular; the two latter ought to be combined, and used as an astringent and stomachic, rather than a laxative medicine.

By a proper attention to these rules digestion may be promoted; the generation of air, the distention of the stomach and intestines, and diseases arising from a laxity of the fibres, and from acidity in the bowels may be prevented.

WANT of exercise, and free air, render children extremely liable to the Asthma, as well as other diseases; and from that source spring many of the calamities, with which in large towns they are often distressed.

BUT this cause of sickness is so obvious, that it is sufficient to have mentioned it, and to observe, that it would
be

be an inexcusable want of attention, in those who have the care of children, to neglect any opportunity of procuring for them these advantages*.

* Children do not only suffer from neglect, they are also injured by the injudicious contrivances intended for their benefit; thus the carriages which are used for exercising them, cramp their bodies, bend their soft bones, and distort their tender joints.

They are also sometimes injured by being placed in low seats, intended for safe and easy accommodation; by pressing with their whole weight in an improper situation, the soft bones yielding like wax to every impression, are gradually bent, the legs become crooked, and the body deformed.

The absurd inventions for correcting the shape, are also extremely pernicious, and often occasion these very evils which they are intended to remedy.

C H A P. IV.

OF THE CHRONIC ASTHMA.

OF the several minute divisions of the Asthma, it is sufficient to retain that of acute and chronic; having finished what relates to the former, I proceed to make some observations on the latter, which, from the account already given of the simplest species of the disease, may now perhaps be better understood.

THIS division is absolutely necessary, and naturally takes place, since the former terminates in a few days in death, a perfect recovery, or a chronic disease; whereas the latter, which is often a
con-

consequence of the other, frequently continues for many years, and often during life.

OUR enquiry therefore must be confined to that difficulty of breathing alone, which proceeds from some defect in the bronchial vessels; for when it is occasioned by an inflammation, or any obstruction of the lungs, a pleurisy, peripneumony, hydrops pectoris, ascites, or any other ailment, whether it appears as a concomitant or consequence of these, the treatment of it belongs to the particular disorder by which it is occasioned, and not to the present subject.

IT has already been observed, that the causes which dispose to this disease *, are such as produce a laxity in the fibres, acidity and flatulence in the bowels, and an accumulation of the

* Vide Part II. Chapter I. page 69, 70.

perspirable matter which ought to be discharged from the lungs in expiration, These causes concur to load the bronchial vessels, to weaken their tone, and to straiten the chest; hence the contraction and dilatation of the lungs is interrupted, they yield too readily to the force of the air, which is drawn in by inspiration, and do not sufficiently expel it by expiration; these reciprocal motions are imperfectly performed, and too quickly repeated; the bronchial vessels, by the continued operation of the same causes, are at length so much injured, as to be very easily affected by the different changes of the atmosphere, the disease becomes habitual, and the lungs are in some constitutions of air too much contracted, and in others too much dilated; hence it has been observed by practical writers, that some Asthmatic patients have been relieved by retiring from the gross air of a city, while
in

in others by that very means the disease has been aggravated *.

THUS though some find themselves more at ease in town, and others in the country, yet the cause of the disorder is alike in both, that is, the bronchial vessels have lost their proper tone, and are deprived of that elasticity, which is absolutely necessary to their being adapted to different regions and situations, and to different constitutions of air.

WHETHER therefore the bronchial vessels are contracted or dilated, and whether the complaint is called Dyspnoea or Orthopnoea, Asthma Humidum, or Siccum, Spasmodicum, or Suffocativum, the disease is still essentially the

* Vidi nempe nonnullos qui cum sub crasso aeris æthere satis commode agerent, rus petentes, ab aere sereno, qui plerisque hoc morbo laborantibus levamen efficit, in gravissimam dyspnoeam sunt delapsi. Mead Monita et Præcepta Medica in Capite de Asthmate.

same ;

same; and it may now perhaps be easy to account for many cases of the chronic Asthma, of which the patients can give no other history, than that they have been subject to periodical returns of it, from their earliest infancy; since we have already seen*, that this species of the disease is often a consequence of the former, when it has either been intirely neglected, or improperly treated †.

WHEN the Asthma has been confirmed by long continuance, and is become habitual, it is seldom completely cured ‡; but fortunately the method to be follow-

* Part I. Chapter I. Section II. page 23, and Chapter IV. page 33.

† This seems to have been Sir John Floyer's case. I cannot, says he, remember the first occasion of my Asthma, but have been told, it was a cold when I first went to school; as my Asthma was not hereditary from my ancestors, so, I thank God, neither of my two sons are inclined to it, who are now past the age in which it seized me. Treatise of the Asthma, page 20.

‡ I have met with some Asthmatics, says Floyer, who have been so for fifty years, as they informed

followed, for palliating the symptoms, is the same by which a radical cure may be effected.

IN CONSIDERING THIS PART OF THE SUBJECT IT IS PROPER TO ENQUIRE.

1. WHAT IS TO BE DONE IN THE TIME OF THE PAROXYSM.

2. WHAT METHOD OUGHT TO BE FOLLOWED IN THE REMISSIONS.

AND,

3. WHAT INTENTIONS OF CURE MAY BE COMMON TO BOTH.

I PROCEED to treat of the latter as being the most universal.

formed me, and yet in tolerable health, without any considerable decay in their lungs, or disability to perform their usual employments, which I oft reflect on to encourage my patients and myself, who yet can study, walk, ride and follow my employment, eat and drink, and sleep as well as ever I could, neither am I yet sensible of any decay in my lungs, page 21.

H

A LIGHT

A LIGHT nourishing diet is in all cases to be recommended, and that not only for a few weeks or months, but to be carefully persisted in, till the habit is so much altered as to render the patient, as much as may be, secure against a relapse; and when the disease cannot be entirely removed, the fits may, by a constant and uniform regulation of diet, be rendered milder and less frequent.

For this purpose milk is recommended; and as it is easily assimilated, it is usually attended with signal advantages; but when it is long persisted in, and especially when a total abstinence from animal food is observed, it is apt to occasion flatulence and acidities in the stomach and intestines, by which they are weakened * and distended, so as to press up the diaphragm, straiten the chest, and prevent the due expansion of the

* See Dr. Barry, on the digestions and discharges of the human body, page 111, &c. &c.

lungs

lungs *. It is therefore prudent, even when such a course is prescribed, to allow at the same time a moderate use of animal food ; and to restrict the use of milk entirely to that season, in which by feeding in a proper pasture, the juices of the animal are rendered more balsamick.

SOME regard ought also to be had to the particular kind of food in which the animal delights, and for that reason goats milk is preferable to any other, for as that creature generally browses upon pectoral and aromatic herbs, its milk is impregnated with the virtues of which these plants are possessed, and is therefore supposed to be more medicinal.

IN some cases, whey, and in others, milk, may be preferable ; but whether

* Sir John Floyer drank asses milk, which he says increased the phlegm, and stopt up the lungs. Treatise of the Asthma, page 19.

the one or the other is used, it is always proper that it should be taken upon an empty stomach.

IN other respects a light diet, consisting of animal food, with the moderate use of wine, is preferable in Asthmatic complaints to a liquid or vegetable one, as both these tend in the first place, to relax, to generate air, and to distend the bowels; and in the other digestions to produce a crude chyle, and a viscid blood *.

BUT whatever diet or medicine is prescribed, it is always proper to begin by clearing the first passages, since an accumulation of phlegm is generally a distressing symptom to Asthmatic patients.

AN emetic therefore is first of all to be given, and that it may also operate as a cathartic, a due proportion of tar-

* Barry on Digestions passim.

tar emetic may be joined to a proper quantity of ipecacuanha ; but if this should not open the body, a dose of sacred tincture, or tincture of rhubarb, will be necessary.

FROM the history of this disease it appears, that a method somewhat different, from what has been found effectual for removing a paroxysm of the acute Asthma, must be followed in the chronic. In a recent case, where the bronchial vessels have not intirely lost their tone, stimulating medicines, by exciting them to contraction, contribute to restore that elasticity, which is necessary for respiration : but when the vessels are much relaxed, and have long lost their elasticity, every attempt to restore it suddenly must prove unsuccessful ; and therefore it is improper to endeavour to remove the Asthmatic paroxysm, by stimulating medicines, until the relaxed fibres have in some degree recovered their usual tone.

HENCE it is also evident, that bleeding can seldom be proper in the chronic Asthma; for though lessening the quantity of blood should render the symptoms easier, or procure a temporary remission of the Asthmatic paroxysm, yet upon the whole, it must have a tendency still further to relax the fibres, and increase the general weakness of the vascular system. Such indeed are the natural consequences of this evacuation; such are the effects which in practice we find produced by it; and such is the account given of it by Sir John Floyer, and Dr. Smollet, from their own experience in this particular disease*.

* *Gravescente dyspnœa phlebotomia frustra tentata. Sanguinis missione vis vitæ diminuta: fiebat pulsus debilior, respiratio difficilior. In pejus ruunt omnia. Febris anomola in febriculam continuam mutata. Dyspnœa confirmata. Fibrarum compages soluta. Valetudo penitus eversa. See Dr. Smollet's Case, in his Travels, Vol. I. Letter XI. page 179.*

Sir John Floyer also often vomited, bled, purged in the intervals, but found no relief by any of these methods. *Treatise of the Asthma, page 19.*

FROM

FROM hence likewise we learn, that the indiscriminate use of pectoral and balsamic medicines must be very improper, since in general they are apt to load and relax the stomach, and to weaken the organs of digestion.

OF all the pectoral medicines recommended in this disease, there are none more effectual than the *pilulæ scilliticæ*, and the *pilulæ ex allio**; but even these, in some delicate constitutions, oppress the stomach, pall the appetite, and hinder digestion.

A LESS equivocal remedy, and better adapted to all constitutions, is cam-

* *Pharmacopœiæ Pauperum in Usus Nosocomii Regii, Edinburgensis*: the dose prescribed in the *Tabula Posologica* of that Dispensatory, is much too small; no material service is to be expected from that medicine, unless it is given to the quantity of half an ounce, or six drachms a day. I have known an ounce taken in twenty-four hours, and this dose continued for some time, with considerable advantage.

phor; it operates sooner, and more powerfully, when it is given in that form inserted in the Dispensatory of the College, under the title of Julepum e Camphora; when taken in substance, it lies long undissolved in the stomach; but when given in a liquid form, it often procures immediate ease in habitual Asthmatic paroxysms, even when every other medicine, usually prescribed in such cases, has proved ineffectual. A table spoonful or two may be given every three or four hours, or as often as there is any return of the Asthmatic paroxysm.

WHAT has been already mentioned, is only to be considered as preparatory to a lasting cure; to accomplish this, the relaxed fibres must be restored to their proper tone, and the organs of digestion strengthened.

It is not sufficient, therefore, that a careful regulation of diet is observed;
it

it is also necessary, that the stomach and bowels should be rendered capable of converting it into proper nourishment. Such medicines are therefore to be given, as tend to strengthen the alimentary canal, and of these the mildest should first be used ; more powerful astringents may afterwards be administered, and at last such are to be prescribed, as not only operate in the first passages, but which have an effect in the other digestions, and which tend universally to strengthen the habit.

It will therefore be proper to begin with the lightest aromatic bitters, and the elixir vitrioli, or tinctura helvetii styptica ; to proceed next to the mildest preparations of the bark, and at length to prescribe it in substance joined with steel, or some of its preparations.

While every endeavour is used to strengthen the solids, and mend the crasis of the blood, it is also necessary that
some

some out-let should be prepared, for carrying off such vitiated particles, as cannot again be restored to a sound state, and for this purpose setons issues, and perpetual blisters, have been used successfully *.

THE air ought also in every case to be adapted, as much as possible, to the constitution of the patient; but this part of the regimen can only be determined by attending carefully to the different effects of the various changes of air in particular cases.

THROUGH the whole course of the disease a serene temper of mind should be constantly maintained, since experi-

* Sir John Floyer recommends issues, from a consideration of the benefit, that is often received from critical evacuations in Asthmatic cases; and adds, that he had been informed that King William, during the running of the sore upon his shoulder, made by the cannon bullet at the battle of the Boyn in Ireland, was free from any trouble of his Asthma. Treatise of the Asthma, page 108.

ence

ence evinces, that Asthmatic paroxysms have often been occasioned by fear, anger, joy and grief*.

MODERATE exercise also, and especially riding, when the patient can bear it, has a good effect in promoting digestion, and in bracing the fibres.

BUT the most powerful remedy for strengthening the habit, and confirming the cure, is the cold bath. I have not indeed had sufficient opportunity of ascertaining its good effects in this disease; but from what I have observed, the use of it, under a prudent direction, seems highly worthy of further trial. Some instances of the signal advantage of it may be seen in Dr. Smollet's travels; and as, according to Dr. Heberden, "there cannot be a more favourable
" opportunity of learning the nature and

* *Difficultate autem spirandi laborantibus, clamore atque precipiti iracundia abstinendum. Hippocratis Epidem, Lib. vi. Sect. iv.*

“ cure of a distemper, than when we
 “ meet with a case where the physician
 “ has been always present with the pa-
 “ tient, and where he must be supposed
 “ to have paid due attention to every
 “ circumstance * ;” I shall here give Dr.
 Smollet’s account of the effect of cold
 bathing in his own words.

“ In consequence of a cold caught a
 “ few days after my arrival in France, I
 “ was seized with a violent cough, at-
 “ tended with a fever and stitches in my
 “ breast, which tormented me all night
 “ long without ceasing. At the same time
 “ I had a great discharge by expectora-
 “ tion, and such a dejection of spirits as
 “ I never felt before. In this situation I
 “ took a step which may appear to have
 “ been desperate. I knew there was no
 “ impostume in my lungs, and I supposed
 “ the stitches were spasmodical. I was
 “ sensible that all my complaints were

* Medical Transactions, Vol. I. page 46.

“ originally

“ originally derived from relaxation. I
 “ therefore hired a chaise, and going to
 “ the beach about a league from the
 “ town, plunged into the sea without
 “ hesitation. By this desperate remedy,
 “ I got a fresh cold in my head : but
 “ my stitches and fever vanished the ve-
 “ ry first day ; and by a daily repetition
 “ of the bath, I have diminished my
 “ cough, strengthened my body, and
 “ recovered my spirits*.

AND again, “ His agitated furiis, æger
 “ ad mare provolat : in fluctus se præ-
 “ cipitem dat : periculum factum spem
 “ non fefellit : decies iteratum, felix
 “ faustumque evasit. Elater novus fibris
 “ conciliatur. Febricula fugatur. Acris
 “ dyspnœa solvitur †.

FURTHER, “ Desperatis denique rebus,
 “ iterum ad mare veluti ad anceps re-
 “ medium recurritur. Balneum hoc
 “ semper benignum. Dolor statim avo-

* Volume I. page 22.

† Id. Ibid. page 179.

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“ lat. Tertio die Febris retrocessit. Im-
 “ mersio quotidiana antemeridiana, ad
 “ vices quinquaginta repetita, sympto-
 “ mata graviora subjugavit *.”

CÆLIUS AURELIANUS also recom-
 mends cold bathing, and residing near
 the sea-coast, for the cure of the Asth-
 ma †.

SIR John Floyer too relates a case
 where it was attended with remarkable
 benefit, and in which the complaint
 returned upon neglecting the remedy ‡.

THE efficacy of cold bathing is also
 confirmed by Dr. Baynard. I have, says
 he, “ had several accounts of people’s
 “ being much relieved, and some per-

* Volume I. page 180.

† Utilis denique maritima, et plurima mare te-
 nus conversatio, atque consuetudo frigidi lavacri,
 quam psichrolysiæ appellant. Chronion, Lib. III.
 de Asthmate, pag. 75. Basileæ 1729.

‡ History of Cold Bathing, page 127.

“fectly

“fectly cured, by the use of cold im-
 “mersion in Asthmas, and other dif-
 “ficulties of breathing; especially if
 “the infirmity is taken in the begin-
 “ning, and not confirmed by time.
 “Yet an old gentleman of near 60
 “years lately told me, that having had
 “a convulsive Asthma for at least seven
 “years, he was so cured at three times
 “bathing, that he had not the least fit
 “in three months after, and believes,
 “that had he lived temperate, and con-
 “tinued bathing sometimes, it would
 “not have returned *.”

THESE testimonies concerning the
 good effects of cold bathing are so clear
 and convincing, that they require no
 commentary. It may however be ne-
 cessary to observe, that the greatest skill
 and caution is requisite, in distinguish-
 ing the particular cases in which it may
 be proper, since there are many diseases

* History of Cold Bathing, Part II. page 127.

accompanied with a symptomatical difficulty of breathing, in which it might be pernicious *.

BESIDES the cases in which the Asthma appears as an original disease, many disorders are accompanied with a difficulty of breathing, so violent and distressing, as to require the principal attention of the physician; but in these instances, the cure will seldom succeed without a careful enquiry into the original cause of the complaint.

* It is not in the Asthma alone that the cold bath has been used successfully; there are indeed few chronic diseases in which it has not been attended with good effects; in what are called Nervous Disorders, in Hysterick and Hypochondriac complaints, and in all these which are occasioned by laxity, and accompanied with dejection of spirits, it is the best remedy; but when the bowels are obstructed, it ought not to be used.

It may be added, that there is no such certain preservative against the frequent relapses to which those persons are subject, who have laboured under intermitting and remitting fevers.

OLD Asthmatic disorders often occasion tubercles in the lungs *, a rupture of the vessels, and an extravasation of serous humours, by which a foundation is laid for abscesses, an hæmoptoe, and an hydrops pectoris. I shall not here enquire into the nature and cure of these diseases, having little to offer upon the subject which is not already generally known; and shall therefore only observe, that though these complaints often prove fatal, yet they are not universally to be pronounced incurable; since there are many instances of persons being recovered, when the case has been seemingly desperate, which ought to

* I believe, says Floyer, all old Asthmatics have several tubercula in their lungs, and the glands of the trachea are much relaxed by the frequent defluxion of a mucus through them; but the frequent expectorations carry off the fullness of humours; and I have observed very few to die of the Asthma fit, but the frequency of that often occasions consumptions in lean habits, and dropsies, lethargies, or inflammations of the lungs in fatter constitutions, which prove fatal. Treatise of the Asthma, page 21, 22.

I

encou-

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encourage physicians, to attempt other methods of cure than those which are commonly practised.

ABOUT the end of November 1765, I was desired to visit a boy about ten years old, who had for some time laboured under a consumption of the lungs, brought on as far as I could learn by a neglected Asthma; he had been ill for more than a year, and was reduced to the lowest pitch of weakness; he was wasting under a continual hectic fever, colliquative sweats, and a diarrhoea; a constant difficulty of breathing, an incessant teasing cough, great thirst, and an intire prostration of appetite; he could not sit up in bed without assistance, nor breath but in an erect posture; the spine was bent, and there was a projection of the ribs in one side*.

WHEN

* When the Asthma occasions a gibbosity in children, it has generally been pronounced mortal. Thus Floyer remarks, that the Asthma often

WHEN I first saw him, I did not expect that any thing could be done for his relief; but upon examining carefully the projection in his side, it seemed probable that an abscess had been formed, and by discharging it externally, he might have some chance to recover. I proposed the operation to his parents; who readily agreed, and it was soon after performed, the opening was made between two ribs on the spot where the projection was most considerable; but though the symptoms afforded reason to expect a large discharge, there was only a small quantity of very thin matter evacuated: the opening was dilated by a

ten causes a gibbosity in young persons, and then it is observed to be fatal ante pubertatem. Chap. III. page 131.

Lommius, treating of the same disease, says, ex Asthmate si factus aliquis gibbosus est ante puberem ætatem, perit. Observationum medicinarum liber secundus, pag. 140. Amstelodami 1738.

Hippocrates has also observed, Οἰόσοι ὕβρις ἐξ ἀσθματος ἢ βηχὸς γίνονται, πρό τῆς ἡβῆς ἀπόλλυνται. Aphorism 46. Sect. vi.

sponge tent, and directions were given, that he should be laid in such a posture, as might determine the matter towards the orifice; the discharge continued for about three weeks, but in very small quantities; at the end of that time, however, the hectic fever, and all the other threatening symptoms disappeared, and he was soon not only restored to perfect health, but became as straight as he had been before his indisposition.

BUT the event is often more unfavourable when the symptoms are much more flattering; and upon the whole, it may be concluded, that though we ought not to be too secure, when the lungs are in the least affected, yet we should not even in the worst cases intirely despair, while any thing which has succeeded in similar instances remains to be done; but in the use of such remedies the greatest caution is necessary, least, by a rash and improper application, the most salutary measures should be discredited.

CHAP.

CHAP. V.

OBSERVATIONS ON FORMER WRITINGS CONCERNING THE CHRONIC ASTHMA.

SOME apology may seem necessary for having, throughout the preceding observations, payed so little deference to the authority of former writers ; the true reason is, that from a long and attentive observation I was convinced, that the disorder which I had undertaken to describe was universally misrepresented ; and that the antient physicians, by labouring to be minute in their accounts of this disease, had become obscure ; by proceeding therefore on the plan chalked out by those who had gone before me, the design of writing

on this subject must have been frustrated.

THE various names by which the Asthma has been distinguished, are taken either from some peculiar symptom or circumstance attending it, and in general, have not the least tendency to point out any useful distinction, nor to afford the smallest hint for the proper treatment of the disease.

Thus a slight degree of this complaint is called Dyspnœa; when it is more severe, it is denominated the Asthma; and when the patient can breathe only in an erect posture, it takes the name of Orthopnœa. These circumstances are indeed very properly remarked, in giving a circumstantial detail of the symptoms; but erecting each of them into a distinct disease, or even a different species, must increase the trouble of young physicians, perplex them in their researches, and draw them

them from an attentive observation of the rise and progress of the disease, to an unprofitable investigation of intricate and (in this case) hurtful minutiae; they should therefore rather be rejected as *difficiles nugæ*, than retained among the collections of useful learning.

OF the same importance are the distinctions of *Asthma convulsivum*, *spasmodicum* and *suffocativum*. None of these require any particular treatment different from the general method, and all of them may therefore be very properly comprehended under the general titles of acute or chronic *Asthma*.

NEITHER does the distinction of *Asthma clausum* and *humidum*, seem better founded, since it rather implies the different periods of a paroxysm, than any distinct species of the disease.

WHAT has involved this subject in yet greater obscurity is, that most of

the writers on this disease have treated of that symptomatical difficulty of breathing which accompanies many disorders, as a distinct species of the original Asthma. They might, with as much propriety, treat of fevers in discoursing of the mania or melancholia, since a delirium is often the most obvious and most alarming symptom in feverish disorders.

By these means every original idea of the Asthma, as a primary disease, has been almost entirely forgotten, and we have been led to expect it in every case, but where it really exists; and there it has generally been confounded with other disorders.

To this we are to attribute many deaths, said to be occasioned by convulsions, worms, and inflammations of the lungs; and from the same cause we may in some measure account for the
general

general mortality among children in early infancy.

BUT as this method of treating of the disease has universally prevailed, it may be proper to mention the different species of the symptomatical Asthma, which have been reckoned up by medical writers; that they may be henceforth referred to the particular diseases by which they have been occasioned; since it is only by a careful attention to the original disorder, which has produced it, that this symptom can be properly treated.

A symptomatical Asthma, or difficulty of breathing, is occasioned,

1. By a suppression of natural or habitual evacuations.
2. By a plethora.
3. By a polypus in the heart, lungs, or any of the large blood vessels.
4. By a peripneumony.
5. By

5. By a pleurisy.
6. By stones or tubercles in the lungs.
7. By an adhesion of the lungs to the pleura.
8. By an abscess or impostume in the lungs.
9. By a cohexy.
10. By a catarrh.
11. By fevers.
12. By the measles.
13. By a compression of the lungs from tumours of various kinds in the thorax, or in the abdomen.
14. By excessive corpulence.
15. By a translation of gouty matter from the extremities to the lungs.
16. By dropries of various kinds.
17. By hysterick and hypochondriac diseases.
18. By flatus distending the abdomen, and pressing the diaphragm upward.
19. By scorbutic humours affecting the lungs.

To

To all these, and many other causes, the Asthma has been attributed, and by some authors as many different divisions have been made of the disease, and for each of them different remedies have been proposed.

Whatever appearance this affected minuteness may have of perspicuity and precision, it can have no other tendency but to involve the subject in obscurity.

BUT however the names of diseases may have been multiplied, yet the real maladies to which mankind are subject have not been increased; and if we have not found effectual remedies for those which are most prevalent, it is because we have forsaken the plain method of attentive observation, by which alone the simple and uniform operations of nature, are to be discovered, and have bewildered ourselves in a maze of artificial distinctions which exist nowhere,

where, but in the vitiated imaginations of those who have contrived or adopted them.

“ Hoc enim mihi persuasissimum ha-
 “ beo, commentitia omnia adeo non
 “ rationali medicinæ inservire, ut, ab
 “ ipsis artis incunabilis ad hæc usque
 “ tempora, nulla ei res majori aut im-
 “ pedimento fuerit aut dedecori. Ji-
 “ que semper scriptores de re medica
 “ optime meruisse visi sunt, qui nullis
 “ hujusmodi diverticulis devii abrepti,
 “ sed in morbis ipsis, ipsorumque cu-
 “ rationibus observandis defixi, fidis
 “ omnia literis mandarunt, nihil, nisi
 “ naturam rerum evidentem, sensibus-
 “ que et rectæ rationi plane obviam;
 “ veritatemque ipsam contemplati *.”

* G. Baker de Catarrho et de Dysenteria Lon-
 dinensi Libellus, in Præfatione.

OBSERVATIONS

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HOOPING COUGH.

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OBSERVATIONS ON THE
HOOPING COUGH.

C H A P. I.

SOME ACCOUNT OF THE DISEASE,
AND OF THE METHOD OF CURE.

SINCE the Hooping Cough, as well as other diseases of children, has been slightly passed over by medical writers; and as it bears some analogy to the Asthma, in the irregular returns of the paroxysm—the remissions—affecting the breathing—occasioning hoarseness—yielding to a method of cure, similar to what has been recommended for that disease—and terminating, when neglected, in a chronic Asthma, or Plithis Pulmonalis; I shall

shall add some observations on it resulting chiefly from experience.

IN the beginning, the advances of the Hooping Cough are generally slow, and almost imperceptible; the cough is neither frequent nor violent, and the symptoms are scarcely to be distinguished from those of a common cold; but in the progress the disease is more severe, the cough more frequent, and accompanied with a flux of rheum from the eyes, nose and mouth; the stomach is affected by sympathy, the food thrown up, and a great quantity of viscid phlegm discharged.

IN this state, which may be called the first stage, the disease continues for several weeks, and though the symptoms are sometimes alarming, they are neither dangerous nor difficult of cure; but if, during that period, proper measures are not taken, respiration becomes difficult — the cough increases, and occasions

casions a long and painful inspiration—retching — vomiting — hoarseness — a flushing or livid appearance in the face — tears rush from the eyes — and blood often bursts from the nose, mouth, throat and breast; this may be termed the second stage, in which the danger is much greater than in the first, as these symptoms are often succeeded by an Asthma and convulsions,—a hectic—fever, colliquative sweats—a diarrhœa and phthisis pulmonalis, and generally prove fatal.

AMONG the writers who have delivered medical precepts concerning the Hooping Cough, Sydenham is the most eminent, depending upon so great an authority, in my early practice, I treated the disease in the manner which he recommended*; finding it however not only

* Hac etiam methodo, phlebotomia sciz et repetita catharsi, eaque sola expugnatur tussis convulsiva, malum alias pertinacissimum et pene insuperabile.

only ineffectual, but having some reason to believe, that it was often productive of very bad consequences, I was induced to make trial of other methods of cure, and shall now briefly relate the result of them.

UPON a careful review of the symptoms it appeared, that in the beginning, the disease was not attended with feverish heat, thirst, nor any appearance of inflammation, which could indicate bleeding and other evacuations, or even justify the antiphlogistic method of cure; but that these symptoms, on the contrary, followed in consequence of the child's being weakened, and the humours vitiated by the long continuance of the disease.

bile. Alii quid hic valeant prestare, plane nescio, me in variis atque in omnis fere generis remediis operam non semel perdidisse satis scio. Epistola prima responsoria ad Henricum Paman, M. D.

It

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It was moreover observable, that children were much relieved by frequent vomiting, and when this did not happen, the stomach and lungs were loaded with phlegm, the appetite was depraved, the breathing oppressed, and the patient wasted by a hectic fever.

WHEN therefore the natural efforts to discharge the phlegm proved ineffectual, it seemed proper that they should be assisted, and for this purpose, small doses of the *essentia antimonii* were prescribed, at such intervals, as to clear the stomach and lungs of phlegm, and to keep the body open.

If the breathing was affected, or the lungs infarcted, a blister was applied, or an issue opened, by which the vitiated humours might be discharged, and prevented from falling upon the lungs.

FINDING this method more effectual than that which I had formerly followed, I persisted in it for some time; but after observing the good effects of affa-fœtida in the Asthma, a disease in many respects similar to the Hooping Cough, I resolved to try whether it might not prove as effectual in the latter as it had done in the former.

WHEN it was prescribed early, other medicines were seldom necessary, the patient, while using it, was generally cool, free from thirst, or any other febrile symptom, and easy between the fits of coughing, which were moderate, and attended with a discharge of phlegm, by which an accumulation of viscid humours, in the stomach and lungs, was prevented, the appetite preserved, and all the excretions duely maintained.

A DRACHM and a half, or two drachms, dissolved in six or eight ounces
of

of pennyroyal water, was given every day, but the dose was increased or diminished, according to the strength, age and constitution of the patient.

LAST year, when the Hooping Cough was epidemic, and so malignant, that in some families three or four children died, this medicine had so good an effect, that none (so far as I know) who took it from the beginning of the disease, were even for one day confined by sickness.

IN one family consisting of five children, of whom the eldest was seven, and the youngest two years old, it was prescribed upon the first appearance of the disease; an ounce of it was dissolved in a quart bottle of pennyroyal water, and this quantity was generally used every day; the children were so fond of it, that they often begged to have more than was prescribed for them.

No other medicine was given thro' the whole course of the disease, excepting a dose of rhubarb and magnesia occasionally, and in two of the children, in whom the breathing seemed a little affected, a blister was applied, and an issue opened between the shoulders; they all got easily over the disease, which was of shorter duration than usual, and so mild, that they continued through the whole course of it, as chearful and playful as in perfect health.

BUT tho' affasœtida has been given with remarkable success in the early stage of the Hooping Cough, yet I never ventured to prescribe it in the advanced state, or when the disease was accompanied with a hectic fever, hæmorrhage, or phthifical symptoms.

It is not therefore to be imagined, that no other medicine is at any time necessary, for as the management must always depend upon particular circumstances, no
inva-

invariable rule can be laid down; thus on some occasions emetics, blisters, issues and setons; and on others, astringent medicines may be indicated; I shall therefore now endeavour to point out such anomalous appearances, as render some variety necessary in the treatment of the disease.

IF the child's breathing is oppressed, or if he is hot and feverish between the coughing paroxysms, it will be necessary to apply a blistering plaister between the shoulders, and to open an issue, or put a seton in some convenient place.

WHEN the stomach and lungs are loaded with phlegm, the tartar emetic may be given as directed by Dr Fothergill, * or the essentia antimonii may be used, to the quantity of a drachm

* Medical Observations, by a society in London, Vol. III. page 119.

in the day at proper intervals ; if the child is weak, or very young, a smaller dose may be given, but more will be necessary for strong robust children.

If the patient is much reduced by the long continuance of the disease, and hectic symptoms are observed, the Peruvian bark may be given with great advantage ; but as it is a powerful medicine, and not equally suited to all cases and constitutions, some caution is necessary in the direction of it.

If the tartar emetic, or essentia antimonii, has not already been used, or if by the use of them the lungs have not been sufficiently cleared of phlegm, and the stomach and bowels of acidity, it will be necessary to prescribe a vomit of ipecacuana, and some doses of magnesia and rhubarb, before the bark is administered,

IF

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IF he labours under a hectic or remitting fever, the bark should be given during the remissions.

But if any obstruction in the lungs is suspected, blisters should be applied, and a seton or issue inserted previous to the use of the bark.

WHEN obstructions are already formed, the bark cannot be used with safety, till the resolution of these is attempted by gentle deobstruent medicines.

BUT when the disease is so far advanced, it is in general to be treated in the same manner as a phthisis pulmonalis, and the cure is then chiefly to be accomplished by a milk and vegetable diet, pure air and gentle exercise.

CHAP.

C H A P. II.

OF THE CAUSE OF THE
HOOPING COUGH.

IT is obvious, that the Hooping Cough must be occasioned by such causes as subsist universally; and since it is chiefly incident to children, may it not be owing to the same peculiarities in them, by which the Asthma seems to be produced?

Many arguments might be adduced in support of this conjecture, but as the method of cure, which has been recommended, is supported by experience, it does not depend upon the discussion of this question.

If

If however it is considered, that all children, whether strong and healthy, or weak and infirm, are equally subject to this disease, and that no means of prevention can preserve them from its attack, the conjecture will not appear improbable; and if we compare the diseases in these circumstances in which they resemble each other, both with respect to the symptoms and consequences, the evidence in confirmation of it will, perhaps, appear as strong, as the nature of such inquiries will admit.

CHAP. III.

HISTORY OF THE HOOPING COUGH.

HAVING thus related such practical observations on the Hooping Cough, as I have learned from experience, I shall now proceed to consider the accounts of it that have been transmitted to us by medical writers.

THE antients, so far as I know, have left nothing on record concerning this disease, and the few moderns who have treated of it differ widely, both as to its seat and cause. It has been called *Tussis Ferina—Perennis—Convulsiva—Suffocativa—Puerilis*, and in English the *Chin Cough* and *Hooping Cough*.

SOME

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SOME imagine it to be seated in the stomach, others in the lungs, and others in the larynx and pharynx.

IT has been attributed by some to a general laxity and irritability of the body, and especially of the stomach; and by others, it has been said principally to consist in the inflammation of the superior part of the larynx and pharynx.

WITHOUT entering upon a discussion of these various opinions, it is sufficient to observe, that they have had little influence on the practice of those who have adopted them, since we may find the same person alledging laxity and irritability to be the cause of the disease, and recommending copious bleeding and purging for the cure.

THUS, though the conjectures have been various concerning the cause of this disorder, and the parts which it principally affects, yet the practice has not been

been so much diversified, most authors, before Sydenham wrote, as if they had despaired of curing the disease by any rational means, have had recourse to charms and incantations, or to some favourite specific; but these, upon trial, have been found to fall very far short of the powers ascribed to them by their respective authors; such are the charms of respiring the breath of a frog or fox, and such are the cup mofs recommended by Dr. Willis *; and the syrup of pennyroyal or ground ivy, acidulated with oil of vitriol, prescribed by Mr. Boyle †; all which probably, from their having been found inadequate to the purposes for which they were intended, have long since become obsolete.

WILLIS, in his account of the Hooping Cough, says, that the method of cure which succeeds in other coughs, is fel-

* Willis de Medicamentorum operationibus, Sect. I. Cap. vi.

† Boyle's Receipts, Vol. I. Decad. ix. No. III.

dom of any use in this, wherefore old women and quacks are oftener consulted than physicians; and rational methods of cure give place to empirical prescriptions.

AMONGST the many remedies of this kind, the muscus pyxidatus is generally preferred; and if it should not prove effectual, a sudden fright is recommended.

BUT when these empirical methods fail, the rational method of treating the disease will probably succeed; and this consists in purging, vomiting, blistering and bleeding.

HE also recommends the tinctura sulphuris, three drops of which is to be given every night and morning, in a spoonful of the syrupus e musco pyxidato.

WHEN

WHEN all these have failed, an expression of millepedes and a pectoral ptisan are to be prescribed; but as he does not seem to entertain great confidence of their efficacy, and as they want that simplicity and elegance which is now universally studied in prescription, it is unnecessary to transcribe them.

SYDENHAM, justly alarmed by the excess of the hot regimen, which prevailed in his time, was earnest in combating the prejudices which had been strongly imbibed in favour of it, and fortunate in reforming a practice which, from the general and indiscriminate application of it, had become destructive; his observations have therefore been held in great esteem, and ever will while a rational philosophy directs the practice of physick.

BUT so nice are the rules which regard the cure of diseases, and so limited the human capacity, that the healing
art

art does not admit of perfection, great progress has however been made by throwing off an implicit attachment to general systems, and attending carefully to the progress of diseases in particular cases, the latter furnishes a collection of facts, which may direct us how to proceed in similar circumstances, the former fetters the mind, and misleads the judgment; thus it has happened even to the great Sydenham himself, anxious to overthrow a practice which he knew to be of fatal consequence, and which he saw almost universally adopted; he was insensibly led to the other extreme, and insisted too generally upon the cooling regimen, and anti-phlogistic method of cure, which, in the unlimited application of it, he has also extended to the Hooping Cough, a disease where it can with no propriety take place.

SINCE therefore the authority of a
practical writer so eminent, so justly
L admired,

admired, and so universally followed, is apt to mislead even the most intelligent, it will be proper laying aside the influence of authority *, to examine this matter by the test of reason and experience.

THE antiphlogistic method of cure is peculiarly adapted to such violent inflammatory diseases as finish their course in a short time; and, if the vis vitæ is not lessened by copious bleeding or other evacuations, speedily terminate in a rupture of the vessels, gangrene, supuration or death; but these diseases, violent as they are, have never been reckoned so dangerous nor difficult of cure, as those that are slow in their approaches, tedious in their course, which insensibly weaken the vital powers, and secretly undermine the constitution. Physicians therefore in all ages have agreed, that diseases occasioned by inanition, and accompanied with weak-

* Oportet itaque ubi aliquid non respondit, non tanti putare authorem quanti ægrum, et experiri aliud atque aliud. Celsus. Lib. III. Cap. I. p. 112.

ness, are much more difficult of cure, than those that proceed from repletion, since it is easy speedily to empty the vessels and reduce the strength, but very difficult to restore vigour to the decayed solids, and to furnish an immediate supply of sound and wholesome juices. When therefore it can be foretold that a disease shall prove tedious, it ought to be the principal aim of the physician to support the strength during its course, and to avoid every thing which might have a contrary effect; hence Hippocrates has observed, that many err in a too sparing regimen, and that the inconveniences arising from that source, have worse consequences than those which proceed from a too full diet *.

* Εἰν τῇσι λεπτήσι διαίτησιν ἁμαρτάνουσιν οἱ νοσέοντες διο μαλλὸν βλάπτονται, παν γαρ το ἁμαρτημα, ὃ ἂν γίνηται, μαλλον (εν τῇσι λεπτήσι) ἢ ἐν τῇσιν ὀλίγον ἀδροτέρῃσι διαίτησι. Διὰ τῆτο δε καί τοῖσιν ὑγιαίνουσι σφαλεραί αἱ πανύλεπταί δε καί καθεστηκευαι δε ἀκριβέες δίδαιται, ὅτι τά ἁμαρτανόμενα χαλεποτερόν φέρουσι. Διὰ τῆτο εν αἱ λεπταί δε ἀκριβέες δίδαιται σφαλεραί ἐς τὰ πλειστα τῶν μικρόν ἀδροτέρων.

Hippocrates Aphor. 5. Sect. I.

BUT in a disease in which a constant expectoration ought to be maintained, it is still more necessary to attend to this point, since without a due effort to discharge the offending matter, the lungs must be obstructed, and the worst consequences produced. This is so well known to practical physicians, that even in the pleurisy, one of the most violent inflammatory diseases, in which the freest application of the antiphlogistic method of cure has been unanimously recommended, all evacuations are suspended, whenever there is any appearance of a critical expectoration.

HOFFMAN relates, that the Hooping Cough was epidemic at Berlin in the year 1709 ; and from the extraordinary severity of the season, it became extremely malignant. He was at that time physician to the King of Prussia, and was very often consulted.

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THE method which he recommends from experience, is to apply volatile liniments to the stomach and belly ; to keep the body open by clysters, and to administer the lightest pectorals internally, when by these means the violence of the disease has abated, he recommends clearing the stomach and bowels, and the bronchial vessels, from the viscid humours with which they abound by the use of the following mixture.

R. Aquæ hyssipi.

Veronicæ singulorum unciam unam.

Essentiæ croci.

*Spiritis salis ammoniaci singulorum
guttas quindecim.*

*Syrupi mannæ cum Rhabarbaro drach-
mas duas.*

Tartari emetici soluti granam unam.

To children from twelve to fifteen the whole of this mixture is to be prescribed, one half of it to those of six, seven and eight, and a fourth part of it to

those of three years old. It excites vomiting, by which the child is instantly relieved, and promotes expectoration.

It is to be repeated every second day, and in the intervals mixtures are to be prescribed compounded of simple waters, pulvis marchionis, cinnabar, diaphoretic antimony, spiritus cornu cervi succinatus, and essentia croci.

BUT he seems to trust chiefly to the use of tartar emetic. “ Et certe concisa dosi tartarus emeticus solutus in mixtura commoda, ejusmodi in casibus si detur, longe optimum & desideratissimum præstat effectum.” *

DR. Astruc advises to bleed the child once, if he is eight or nine months old; if he exceeds two years, twice. In the next place he should take an emetic. Ipecacuana, according to him, is a specific in this disease, as well as in the

* Frederici Hoffmanni opera, Tom. 3. Sect. 2. Cap. 3. pag. 121, Genev. 1740.

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dysentery. He also advises the soluble stibiated tartar, the dose is one third of a grain to children who are not a year old. To those who exceed this age, one grain may be given; but divided and dissolved in three different vessels, all of which (solutions) or only two are to be used, as the occasion requires. After vomiting, the patient should be purged with an infusion of rhubarb or senna. Afterward a strict regimen is to be observed, and such remedies exhibited as promote digestion; for this purpose stomachics and absorbents, and above all, the pulvis temperans of Stahl are recommended. If these prove ineffectual, recourse must be had to stomachics, and especially the theriaca (which ought to be given to the quantity of fifteen grains;) elixir proprietatis, confection of hyacinth, salt of wormwood, powder against the epilepsy, or powder of vipers, and the water or tincture of rhubarb. If the violence of the cough still subsists, it should be checked by

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narco-

narcotics. As to pectorals, if the lungs be not affected, they should not be used, for as they are oleaginous and relaxing, they considerably prejudice the stomach *.

Dr. Burton, on the contrary, hath declared against bleeding and purging, excepting in very urgent cases, and hath recommended the following medicine.

R. Cantbaridum.

Camphoræ singulorum drachmam unam.

Extracti corticis peruviani drachmas tres, m. f. pulvis.

OF this he gives eight or nine grains every third or fourth hour in a spoonful of any simple water, or in a julep with balsam capivi; he says, that it is not proper in such chin coughs as proceed from a thin sharp rheum; but that when the disease has been attended with a tough,

* Astruc on the diseases of children, page 141—151.

viscid phlegm, he hath never known it fail *.

DR. Huxham recommends Sydenham's method of treating the Hooping Cough, but his deference to that great practical physician has not prevented him from discovering his defects; and the additions which he has made from his own observations, make indeed a very necessary supplement to those of Sydenham. “ Vix unquam cessat tussis con-
“ vulsivæ paroxysmus, antequam irri-
“ tans Pituita tenax vomitu rejicitur :
“ imo tanta sæpe est illuviei copia, ut
“ vomitionem terve, quaterve, proritare
“ necesse sit.

“ Nec solum evacuantibus opus est,
“ exhibenda sunt etiam quæ et nervos
“ et stomachum confirmare valent, ac
“ lentorem sanguinis attenuare. Hoc
“ opus absolvunt optime mercurialia,

* Appendix to his Treatise on the Non Naturals.

“ et cortex Peruvianus, stomachicis ido-
 “ neis adjectis. Spiritus interea diffi-
 “ cultas et pectoris oppressio solutionem
 “ gum. ammoniac. expressionem mil-
 “ leped aut tale quid desiderant sæpe,
 “ vehementiam autem tussis interdum
 “ compescere licet elix. asthmatic. le-
 “ mort e syrupo diacod. quod quidem
 “ est optimum, ac tutissimum in hoc
 “ morbo anodynum. Atqui si humor
 “ acris admodum in laryngem, aut pul-
 “ mones destillat, eum oportet avo-
 “ care admoto cervicibus epispastico.

“ His sæpe cedit remediis facile hic
 “ morbus, alias sæpe contumax admo-
 “ dum; nec nisi tempore et mutatione
 “ cœli fugandus: decantata sane mu-
 “ liercularum specifica (quantum ego
 “ unquam observavi) meræ sunt quif-
 “ quiliæ: imo muscus pyxidatus, modo
 “ si quid valeat, propter vim astringen-
 “ gentem, adeoque corroborantem, et
 “ ad naturam corticis Peruviani aliquan-
 “ to accedentem, valet. Nobile nam-
 “ que

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“ que hoc Indiæ pharmacum non solum
 “ lentos attenuat humores, sed et totum
 “ systema fibrarum confirmat, atque sic
 “ utraque facultate agendo febres inter-
 “ mittentes discutit. — Atqui periodica
 “ hujus pertussis accessio, haud minus
 “ certa sæpe quam vel intermittentium
 “ paroxysmus, non multum abesse ab
 “ eorum indole hunc morbum indicat.
 “ hoc magis etiam probabile videtur,
 “ quod uterque morbus, eadem ple-
 “ rumque tempestate grassatur, ab ea-
 “ dem prope causa pendet, et iisdem
 “ fere remediis curatur*.”

SUCH was Dr. Huxham's opinion of
 this disease, and of the method of treat-
 ing it, in the year 1732; and after e-
 leven years more experience he adds,
 “ Haud raro prodest balneum frigidum,
 ubi omnia incassum exhibita fuere: ca-
 ve tamen ne adsit febricula vel hæmop-
 toe.” †

* Observationes de aere et morbis epidemicis,
 Tom. I. pag. 76, 77. editio secunda, Londini 1752.

† Id. Ibid. volumen alterum, pag. 105. Londini
 1752.

Dr.

Dr. Forbes, in his inaugural dissertation *, recommends change of air, vomiting, bleeding, thin diluting emollient infusions for common drink, expression of millepeds in white wine, spiritus minder. acet scillit. and lac. ammon. to which in particular circumstances should be joined laxatives, decoction of Peruvian bark, vesicatories, and opiates. If a violent hæmorrhage should happen, ligatures are to be applied to the extremities, and cooling, styptic medicines are to be administered.

AFTER following this method for a short time, the muscus pyxidatus, sal. Jovis and Peruvian bark in substance are to be prescribed.

THESE medicines, he adds, are only useful when the fluids are dissolved, the solids relaxed, and the disease is chiefly nervous; but when there is an infarction from viscid matter they are

* De tussi convulsiva Edinburgi 1754.

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extremely hurtful; and if inflammatory symptoms accompany the Hooping Cough, these medicines are to be shunned as poison; and the chief dependance must be placed in the antiphlogistic method of cure.

THIS performance is chiefly collected from the various authors who have treated of the disease; and the opinions which are advanced, are to be considered as inferences from theory, and not the result of experience.

DR. Home * advises copious bleeding, repeated vomiting, purging with rhubarb and calomel, attenuating pectorals, muscus pyxidatus, juice of pennyroyal, the external use of relaxing, and inviscating ointments, and the Peruvian bark.

M. SAUVAGE †, physician to the

* Principia medicinæ, editio secunda, Edinburgi 1762, pag. 122.

† Nosologia methodica, tom. 3. pag. 157, Amstelodami 1763.

king of France, recommends bleeding and vomiting, and an infusion of pennyroyal for ordinary drink. He also advises to purge the child once in three or four days, with manna, rhubarb and calomel, lichen pyxidatus boiled in milk, saccharum saturni, and Peruvian bark, are by him considered as specific in this disease.

M. Lieutand *, first physician to the royal children of France, from a consideration of the great benefit arising from spontaneous vomiting in the Hooping Cough, recommends tartarum stibiatum, radicem Brasiliensem, and Kermes mineral. He observes, that when the fever is high, and the breathing laborious, bleeding may be useful, otherwise it must be hurtful.

Dr. Hillary † observes, that the Hooping Cough appeared in Barbadoes

* Synopsis universæ praxeos medicæ, pag. 494, Amstelodami 1765.

† Observations on the diseases of Barbadoes, pag. 46, second edition, London 1766.

in the month of July 1753, after a great fall of rain, when there could be no suspicion of the infection being brought there by any person whatever; and he therefore concludes, that it is a disease which proceeds from some peculiar disposition in the air, to generate its infection or miasma, or that they can be carried in the air to a very great distance, and being mixed with the saliva, or other circulating fluids, generates a peculiar visciduity in the serous lymphatics, or yet finer fluids, and particularly those of the bronchia and lungs, which at the same time do greatly irritate these sensible nervous parts, so as to produce that nervous cough, and convulsive spasms, which usually attend it, which again are increased by the visciduity of the finer fluids.

HE advises bleeding such children as are of a sanguine plethoric constitution, and to keep the body moderately open. He also recommends the following

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ing prescription for attenuating the viscid fluids.

*℞. Millepedum vivorum bene lotorum
semiunciam, contunde in mortario
vitreo et superaffunde infusionis
Radici Glycirrizæ uncias octo,
probe conterentur, deinde cola, et
colaturæ adde.*

Aquæ nucis moscati.

*Spiritus nitri dulcis singulorum semi-
unciam.*

Tincturæ cantharidum drachmas duas.

*Syrupi e meconio semiunciam vel un-
ciam unam.*

*Exhibe cochlearium unum subinde ur-
gente tussi. Augetur dosi pro
ratione ætatis ægri.*

IF the symptoms increase and the patient's pulse will permit, more blood may be taken away; but if the pulse be small and low, a vesicatory may be applied and kept open, or the quantity of the tinctura cantharidum increased,
if

if the symptoms of a strangury do not forbid. If convulsions come on, musk is to be given with a little fyrupus e meconio, or elixir paregoricum *.

— Mr. Armstrong recommends the antimonial wine, or a weak solution of the emetic tartar, with or without the pulvis e chelis, according to the state of the bowels; from the experience he has had of these antimonial medicines, he has, he says, reason to think, that if they are given in time, it will often prevent that obstinate complaint from arriving at such a height, or continuing so long as it commonly does. In this disease, he gives the solution once or twice a day, if the child can bear it, in a sufficient quantity to occasion a retching, and thereby bring up the phlegm. Fourteen patients treated in this manner with the antimonial mixture, got very well over the disease, except one, who was

* Observations on the diseases of Barbadoes, page 46, second edition, London 1766.

seized with the Hooping Cough while she had the measles, and who had been almost a month ill before Mr. Armstrong saw her. In a comparative trial, the antimonial medicine was found a much more effectual emetic, than those compounded of ipecacuana wine, and oxymel of squills.

AFTER all, he adds, the Hooping Cough is a very obstinate complaint, and even the change of air, so much celebrated in this disease, though in some patients it seems to have a remarkable good effect, yet to others it affords no sensible relief*.

DR. Bisset describes the Chin Cough, or Hooping Cough, in the following manner. It is, says he, generally preceded by a short dry cough, attended with hoarseness, resembling a recent cold. This dry cough continues about

* Essay on the diseases most fatal to infants, p. 81—95, London 1766.

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a fortnight before the patient begins to kink, that is, to have convulsive coughing fits, or to expectorate phlegm. The increase and state of the disease commonly take up four weeks ; after which it decreases by slow degrees, and quite ceases about the end of the twelfth week from its first accession. Some violent cases continue four or five weeks longer, and some mild ones terminate in seven or eight weeks. Some patients have frequent returns of it from taking cold ; but such relapses are always slight, and of short duration.

THE disease rarely proves fatal to children above three years of age ; when it does, it is chiefly owing to a fever of the miliary kind, which sometimes attends it, during its encrease or height.

THERE is not any procedure yet known that is capable of stopping its progress ; if any thing can do this, it must take

place in the first fortnight. He has thought that he had, by a particular management, during that period of the disease, in two or three cases, prevented the accession of the convulsive cough.

BLEEDING, in particular cases, laxatives, gentle emetics, attenuants, pectorals, incrassants, anodynes, diaphoretics and corroborants, judiciously prescribed, may often be serviceable; and He has administered them, as palliatives, preservatives, and supporters of the strength with some success. But he was never so fortunate as to make an absolute cure by a copious exhibition of the Peruvian bark; tho' it may have contributed to prevent bad consequences, which otherwise might have happened.

NOTHING is more useful in this disease, than gentle vomits and lenient purgatives. But those children who often vomit in the close of the fits of coughing, and whose bodies are moderately

rately open, do very seldom stand in need either of emetics or laxatives.

THE Peruvian bark should be joined with pectorals, and administered as a stomachic and corroborant. If the child be feverish, it should be omitted till the fever abates, and the saline mixture administered in place of it.

WHEN the bark is given in the increase or height of the disease, it dries up the phlegm, and renders it more viscid, and the coughing fits become more violent and straining to the patient. But when the decrease is much advanced, and the intervals of the fits are long, the bark may sometimes suppress the disease without any bad consequence.

HE recommends for common drink, light spring water sweetened with honey; and in case of bleeding, he advises that it should be acidulated with verjuice or spirit of vitriol *.

* Medical Observations, Newcastle 1766.

Dr. Morrice recommends Peruvian bark and castor, and relates several cases in which he had used it successfully, after having in vain prescribed a variety of balsamics, exercise, change of air, bleeding, blistering, and issues; the dose is fifteen grains of Peruvian bark, and eight grains of castor powdered, and it is given in three spoonfuls of simple alexiterial water. In one case, where the child obstinately refused the bark, he ordered nine grains of castor, and twelve of the pulvis contrayervæ compositus, with ten drops of tincture of castor; it was given every four hours in the alexiterial water, and a blistering plaister was ordered to the neck; in three or four days, the hooping and retching were subdued, and in less than a fortnight, the child was perfectly cured*.

* London Medical Observations, vol. 3. page 281, &c.

Dr.

HOOPING COUGH. 167

Dr. Fothergill has used an antimonial medicine in the cure of the Chin Cough for some years, with so much benefit to the patient, and satisfaction to himself, as to induce him to mention it to many of his physical acquaintances; from several of whom he has received such favourable accounts of its success, as to strengthen his own opinion of its efficacy. The following is the form in which it was prescribed.

*R. Pulveris e chelis cancrorum semidrachmam.
Tartari emetici grana duo, accurate
misceantur.*

ONE grain, one grain and a half, or two grains of this composition, may be added to five or six grains of any testaceous powder, and given in a small spoonful of milk and water, in the forenoon between breakfast and dinner, to a child of a year old: if this quantity does not prove sufficient to excite vo-

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miting.

miting, it should be increased next day to such a dose, as will produce this effect; and, in this manner, let it be daily repeated about the same hour.

THE Dr. likewise gives half the former dose of the antimonial powder, when the fever is vehement, in order to promote a diaphoresis; and to this process he chiefly trusts, seldom having occasion either to bleed, or to use any other kind of evacuation, unless to procure a stool or two daily; for which purpose a proper dose of magnesia, given at bed-time, with the antimonial, seldom failed of answering his expectations *.

* London Medical Observations, vol. 3, page 319, &c.

C H A P. IV.

A COMPARATIVE VIEW OF THE DIFFERENT METHODS OF TREATING THE HOOPING COUGH.

HAVING thus given a general abstract of the principal writings on the Hooping Cough, having mentioned the various opinions which have been adopted concerning it, and the different methods of cure which have been proposed; it may now be proper to compare these methods, to consider the merit of them, and endeavour to distinguish what is established by reason, experiment and observation, from those opinions which have been advanced without sufficient examination.

GALEN

GALEN complained *, that an implicit attachment to particular sects and opinions, had greatly retarded the progress of the healing art, and in our times the same source of error hath prevailed; thus we find, that a deference to the authority of Sydenham has prejudiced many authors in favour of the antiphlogistic method of curing the Hooping cough, and this is not at all surprising, since that excellent practical physician hath recommended it in the strongest terms; but it must be observed, that this seems rather to have proceeded

* Quod semper dico, etiam nunc proloquar, nimirum persuasum me habere, quod difficilimum sit ad veritatem eos revocare, qui sectæ alicujus servituti se addixerunt. Verum qui prudentes sunt, simulque veritatem sincere amant, eos spero custodituros esse ea, quæ veluti judicandi instrumenta nobis a natura data sunt, ad actionum vitæ cognitionem, experientiam dico, et rationem.—Falsæ etenim opiniones animas hominum præoccupantes, non solum surdos, sed et cæcos faciunt, ita ut videre nequeant quæ aliis conspicue apparent.

Galenus de compositione medicamentorum liber octavus. Operum tomus tertius, page 646, Lugdini 1550.

from

from a strong attachment to his favourite system, than from any experience of its particular efficacy in this disease; and this is the more probable, since he hath not with his usual accuracy described the rise, symptoms and progress of the Hooping Cough, which he certainly would have done, had he been fully informed in these particulars; and though he himself takes no notice of it, yet his cotemporary Willis informs us, that physicians had then very little opportunity of being acquainted with this disease; for old women and quacks, he tells us, were oftener consulted, than regular physicians, and rational methods of cure gave place to empirical prescriptions*. We may justly conclude then, that Sydenham had not the same opportunities of ascertaining a proper method of cure for this as for other diseases, and therefore his opinion concerning it ought not to have the same influence, as in those

* Chap. 3. page 142, 143.

cases where his experience hath been more extensive,

IN fact, we find that many judicious practical physicians have entirely rejected that method, and this is most observable in the foreign writers, who may be supposed to be less swayed by Sydenham's authority. Thus Hoffman* treated the disease in a different manner; and M. Lieutaud† expressly declares, that though bleeding may be useful where the fever is high and the breathing laborious, yet in other respects it must be hurtful.

IT is also further to be observed, that even these authors, who have adopted Sydenham's method, do not seem to depend upon it for completing the cure, but as a necessary precaution for preventing obstruction and inflammation. Thus Dr. Huxham‡, after hav-

* Chap. 3. page 149—150. † Ibid. pag. 158.

‡ Ibid. page 153—155.

ing mentioned the antiphlogistic method, proceeds to inform us, that the disease is not to be cured by evacuations alone, medicines are also to be prescribed for bracing the nerves, strengthening the stomach, and attenuating the lentor of the blood : in his later practice he seems indeed, in a great measure, to have relinquished the antiphlogistic method, and to have trusted to strengthening remedies ; and in one of his latest works * he expressly assureth us, that cold bathing hath often proved serviceable, when all other methods have failed.

IT hath already been observed †, that no symptom of fever or inflammation doth usually appear, till the humours have been rendered acrid, and the strength hath been much reduced by the long continuance of the disease ; with what propriety then can evacuations be employed to obviate evils, which

* Chap. 3. page 155.

† Chap. 1. page 130.
only

only arise when the powers of nature have been exhausted by a tedious illness, or by improper management?

To a person who is accustomed to consider the uniformity and simplicity of all nature's works, it may indeed seem inconsistent to recommend large and repeated evacuations in any disease, of which the cure is chiefly to be accomplished by astringent and strengthening remedies; but such inconsistencies have ever been the consequence of deserting the plain path of accurate observation and rational deduction, and involving ourselves in the intricate mazes of artificial systems.

UPON the whole then it appears, that the antiphlogistic method of curing the Hooping Cough, hath been too generally adopted without sufficient examination, but that some of the most approved practical authors* are alto-

* Hoffman, Fothergill, &c.

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ther silent concerning it, and have treated the disease in a very different manner, that most of those who have used it *, have had recourse to astringent remedies to repair the injuries which it naturally occasions, and that others have entirely rejected it †.

BUT though physicians have differed widely as to the propriety of the antiphlogistic method, yet in other respects we shall find a general uniformity of opinion concerning the cure of this disease; and this might be expected from an accurate observation of the progress of nature; for, (whatever may have been affirmed to the contrary) by attending carefully to this unerring guide, we shall generally be enabled to form some plain and useful indications for the cure of diseases.

* Astruc, Huxham, Home, Sauvage, &c.

† Burton, Lieutaud, &c.

THUS

THUS when the phlegm is plentifully discharged, the child is generally easy, the cough moderate, and no medicine requisite; but when the natural efforts are insufficient to expel it by vomiting or expectoration, the symptoms are aggravated, and the disease becomes dangerous. Judging therefore, that the perfection of art is an exact imitation of nature, physicians have unanimously agreed in employing such medicines as might promote these evacuations, and this conformity of practice doth even extend to an almost general election of the same remedy. Thus we find, that though ipecacuana and other emetics have been used, yet antimonial medicines are chiefly prescribed *, as having been found from experience not only well suited to this intention, but also in a great measure to supply the place of cathartic medicines.

* Vide. Chap. 3. passim.

BUT

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BUT though the testimonies concerning the efficacy of antimonial preparations in curing the Hooping Cough are numerous and respectable, nevertheless it may be desirable to accomplish the same intentions by medicines less rough in their operation, and more adapted to the delicacy of that tender age to which the disease is chiefly incident.

THE same objections occur with redoubled force against the use of such strongly stimulating medicines as cantharides; but though a cautious prescriber would perhaps dread the internal use of this powerful remedy, yet there can be no valid objection against the external application of it; and since blisters and issues have been found to have great efficacy in some periods of this disease, it is probable, that the tinctura cantharidum may be rubbed upon the spine and breast with advantage. I have never indeed had any experience of it in the

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Hooping Cough, but in other cases I have often used it successfully; the following is the form in which I have generally prescribed it.

R. Olei laurini unciam unam.

Tincturæ cantbaridum drachmas duas.

Camphoræ drachmam unam.

Olei olivarum, q. s. F. linimentum.

THIS Liniment sometimes occasions an eruption of small pimples, not only on the parts where it is immediately applied, but over the whole body, and when this happens, it is generally more effectual.

To conclude, it hath been found from experience, that the intention of promoting the discharge of phlegm hath been fully answered by assafœtida, that it hath contributed to promote digestion, and to render the body soluble, it hath also this advantage, no inconsiderable
one

one in a tedious disease and in delicate constitutions, that it doth not reduce the strength; but what chiefly recommends it is, that the disease hath been more safely and speedily removed by it than by any other medicine*.

BUT when the disease is accompanied with heat, thirst, and hectic fever, the strength much reduced, and a medicine so stimulating as assafoetida might be hurtful, the Peruvian bark hath often been given with the happiest effect†.

* Chap. 3, pag. 132, 133, 134.

† What has already been advanced concerning the efficacy of the Peruvian bark in this disease is confirmed by that learned and judicious practical physician the late Dr. Whytte, physician to his Majesty, and professor of medicine in the university of Edinburgh. “ In the Chin Cough, when
“ given early, and before any obstructions are
“ formed in the lungs, I have found the Peruvian
“ bark one of the best remedies.” Observations on those diseases which have commonly been called nervous, hypochondriac or hysteric, page 341, Edinburgh 1765.

From a careful review therefore of the various methods of cure which have been proposed for the Hooping Cough, it seems evident, that the judicious management of it, in all its different periods and circumstances, consists in the skilful application of gentle emetics and laxatives, antimonial medicines, assafoetida, mild astringents, Peruvian bark, blisters and issues, and that these, together with a prudent regulation of diet *, are perfectly sufficient for the successful treatment of this alarming disease.

* The regulations of diet proposed for the prevention of the Asthma, may also be applicable in the cure of the Hooping Cough. Vide Part 2, Chap. 3, page 88, 89. See also Part 1, Chap. 6, page 41.

A P P E N D I X.

CONTAINING

R E M A R K S

UPON THE

Natural and Chymical History of

A S S A F O E T I D A.

W I T H

O B S E R V A T I O N S

On its MEDICINAL VIRTUES.

APPENDIX

CONTAINING

REMARKS

UPON THE

Natural and Chymical History of

ASSAFŒTIDA.

WITH

OBSERVATIONS

On its Medicinal Virtues.

AP.

APPENDIX.

REMARKS CONCERNING THE NATURAL AND CHYMICAL HISTORY OF ASSAFOETIDA, AND ITS MEDICINAL VIRTUES.

THE accurate descriptions of diseases delivered by Hippocrates, and his sagacious prognostics concerning them, have in all ages been justly admired; but though he has discovered great discernment and penetration in recording the histories of diseases, and in foretelling the events which are pointed out by particular symptoms, yet his method of cure must in general be allowed to be deficient.

THE modern improvements in Natural History, Chymistry and Experimental Philosophy, have added many

valuable remedies to the *Materia Medica*, and from thence the cure of many diseases hath been rendered more certain and complete. But the abundance of medicines with which we are now supplied, hath given rise to an unbounded variety of prescriptions, of which the application is often determined by novelty and fashion, rather than careful experiment and attentive observation; and hence it hath become difficult to ascertain the powers of different remedies. Such hints therefore concerning the virtues of particular drugs as occur in the writings of Hippocrates, merit our attention, since it is probable, from the simplicity of his practice, and the accuracy of his observations, that the effects of the medicines which he prescribed would be carefully investigated. Some of the few officinals which he used are yet retained, but, in the times of ignorance and barbarism, their names have been so changed, that it is now become difficult to determine what are
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of modern invention, and what have been in use among the antient physicians.

ASSAFOETIDA, which has been recommended in the preceding observations, seems to have been much used by Hippocrates, it was then called Laser, Laserpitium and Silphium*. And these different names were probably applied to different parts or preparations of the same plant, the leaves, stalks and root were used, and the juice was extracted, and prescribed either in a fluid or inspissated form.

IN discoursing concerning the management of those who have been subject to abortions, Hippocrates recommends the topical application of assafoetida, and a liberal use of it internally †. He mentions it as a part of diet, and delivers some observations concerning the advantages and inconveniencies arising from the use of it ‡. He also
remarks

* Newman's Chemistry, page 312. &c. &c.

† Περὶ Επικυνήσιος operum, pag. 262. Francofurti 1624. ‡ Περὶ Διαίτης ΟΞΕΩΝ, p. 383.

remarks that although it grew spontaneously in Libya, yet it could not be raised in Ionia and Peloponesus, though in these regions, the heat of the climate was sufficient to bring it to maturity; and this he attributes to a want of these particles in the soil, which are necessary for the nourishment of the plant*. But from the many attempts which he tells us were made to cultivate it in these countries, we may conclude, that it was esteemed a necessary article in diet, as well as in medicine†.

DIOSCORIDES, amongst many other virtues which are not now expected from it, attributes those of its being a remedy for a cough, disorders in the wind pipe and of the voice, and for icteric complaints. He likewise mentions it as an useful ingredient in seasoning food.

* Περὶ νοουσεων, Lib. 4. p. 498. † Id. ibid.

IT is also used by Celsus, and is by him recommended as a part of diet in the cure of phthifical complaints *.

G A L E N, sensible that in many disorders something more was necessary than the mere regulation of diet, ransacked the animal, mineral and vegetable world, in search of remedies; and these he compounded variously, and introduced that form of prescription, which from the inventor still retains the title of Gale-nical.

IN consequence of this alteration, the dietetic part of medicine was less attended to, and the few medicines used by Hippocrates were less esteemed; thus Galen's account of assafoetida is very different from that of Hippocrates, it is according to him heating and hurtful to the urinary passages, and therefore more adapted to external than internal use †; and indeed in his time it was

* Lib. 10. Cap. 10. † De Simplicibus Medicaminibus, pag. 1100, 1114. Lugduni 1550.

probably a very different remedy from that which had been in use among the Greeks; for we are informed by Pliny, that it had become scarce, and was therefore much adulterated; that the true *Laferpitium* was still in the highest esteem at Rome; but for many years none of that plant was found in the country of Cyrenaica; for the farmers, under the people of Rome, put in their cattle and eat all down, finding greater benefit thereby, than by letting it stand for the Juice. One stalk, he says, had been found, and sent to the emperor Nero as a present.

For many years he adds, the merchants brought into Italy no other *Lafer*, than that which groweth abundantly in Persia or Media, and in Armenia, which is far inferior to that of Cyrenaiaca; but in the consulship of Valerius and Herennius, by great good fortune, there was brought from Cyrene thirty pounds weight of the best *Lafer*, and this was esteemed

esteemed so valuable an acquisition, that it was openly exposed to gratify the public curiosity. He also relates, that Cæsar, in the beginning of the civil war, took out of the chamber of the city, with other treasures both of gold and silver, a hundred and eleven pounds of the best Læser.

THIS medicine therefore, according to Pliny's account, was so much esteemed as to be preserved in the public treasury. But he regrets that what was commonly used, was sophisticated and corrupted with gum, and sagapeum and bruised beans.

HE gives different descriptions of the plant, according to the various informations which he had received concerning it; but that which is most agreeable to the accounts given of it by the best botanical writers is, that it hath large roots, a stem or stalk like sagapeum or
fen-

fennelgeant, and leaves resembling those of smallach or parsley.

ON Parnassus, he adds, there is found great plenty of an herb, which the inhabitants would needs have to be *Laferpitium*, and with which they are indeed wont to abuse and sophisticate that singular and divine plant the true *Laferpitium*, so highly recommended, and of so great account and estimation in the cure of many diseases*.

THIS drug was also used by the Arabian physicians, by whom it was called *Althit*, and from thence it was probably introduced amongst the Monks in the school of Salernum, who being entirely ignorant of its natural history, and the esteem in which it was held by the antients, imposed the name of *Afsacætida* upon it, on account of its smell and appearance; this name is still

* Pliny's Natural History, Vol. 2. pag. 8. Dr. Holland's Translation, London 1601.

still retained in Europe, where it has preserved its reputation as an efficacious medicine.

But though it is no where in so great repute as it was among the ancient Greeks and Romans, yet it is still highly esteemed by the Asiatics. Bontius, a Dutch physician who practised in Batavia, informs us, that the Arabian name Althit is still retained in Hindostan, but it is better known to the inhabitants of Java and Malaia by that of Hin. It grows plentifully in the Persian empire between the cities of Lara and Gamaro, the first of which is not far distant from the sea, and is frequented by the Dutch and English merchants.

THERE are two kinds of it, one of which resembles the willow, and from this *Affatetida* is extracted, by making an incision in the stalks and leaves and pressing out the juice. The roots of the other are like the horse radish, and
its

its leaves resemble those of spurge. Bontius relates, that an Armenian merchant brought some of the roots from Persia, and gave them to him, they were perfectly dry, but filled the house with their flavour, which to the Asiatics was most delicious, though it was intolerable to the Europeans.

THE Juice is expressed from the roots of this plant, and is much used by the Indians in seasoning their food; it is therefore a principal article of commerce, and the Dutch East India Company have always a large quantity of it in their warehouses, which they exchange with the inhabitants of Java for other commodities*.

THE assafœtida which is imported into this country is of a yellow or brown colour, sometimes brittle, but oftner tough and unctuous; it is of an

* Bontius de Medicina Indorum, page 5, Lugduni 1718.

acid taste and a strong foetid smell, resembling garlick, with which it is classed by Hippocrates.

NEWMAN, from four ounces of this gum, obtained by rectified spirit two ounces, six drachms and a half of resinous extract; and afterwards by water three drachms, and half a scruple of gummy extract; and about six drachms and a half of earthy matter remained undissolved. On applying water first, he gained from four ounces, one ounce three scruples and a half of gummy extract. The same quantity yielded with strong French white wine two ounces and a half, and fifteen grains. The smell of assafoetida, according to this experienced chymist, resides wholly in an essential oil, which arises in distillation both with water and spirit. Four ounces distilled with water yields about a drachm of oil*.

* Newman's Chymistry abridged by Lewis, page 312, London 1759.

SINCE so much art was used to adulterate this medicine, even in those countries where the true Lafer was well known, it is not to be supposed that the common affafoetida of our shops, should be equal to that which was formerly so much esteemed by the antient Greeks and Romans, or even what is now used by the Asiatics; but though it is of an inferior kind, it is still a valuable and efficacious medicine, and has been found of great use in many other diseases besides these, for which it has been recommended in the preceding observations.

IT hath been successfully prescribed for correcting flatulence, allaying spasms, and promoting expectoration; it hath been used with advantage in paralytic, nervous, hysteric and hypochondriac diseases, and for dispelling that despondency, with which these illnesses are generally accompanied.

WHEN the powers of nature are languid, the vital functions imperfectly

ly performed, and a warm stimulating cordial is wanted, assafoetida often proves an efficacious remedy. In old age, when the peristaltic motion of the bowels is slow, and the body costive, it is more effectual than laxative medicines, and while it promotes digestion, it exhilarates the spirits, and excites a brisker circulation.

A TINCTURE of it is inserted in the dispensatory of the London College of Physicians, and it is a principal ingredient in many other valuable compositions; but it has generally been given in too small dozes, it is by some nations liberally used in diet, and may certainly be administered with safety, as a medicine, in a larger quantity than is commonly prescribed.

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London 1769

Path. 846 p

urn:nbn:de:bvb:12-bsb10473567-2